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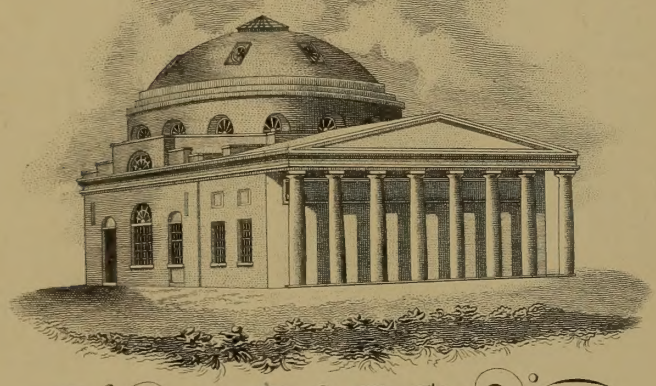

University of Maryland

University of Maryland Theses

Early Doctor of Medicine and Doctor of Physic Dissertations with Corrected Tables of Contents

These manuscripts described as either an Inaugural Dissertation or an Inaugural Essay were presented to the University of Maryland for the Degree of Doctor of Medicine and/or Doctor of Physic during the years 1813-1887. The individual dissertations were bound together during the 1940's. The original tables of contents for the bound volumes contained multiple errors in authors' names, titles, and/or years. To address these errors, an additional "Corrected Table of Contents" has been inserted at the beginning of each volume.

The project team who investigated and corrected the tables of contents were Richard J. Behles, Historical Librarian/Preservation Officer; María Milagros Pinkas, Metadata Management Librarian; Angela Cochrane and Carol Harling-Henry, Resources Division; Sarah Hovde, Abra Schnur and Megan Wolff, Services Division.

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(CORRECTED TABLE OF CONTENTS)

UNIVERSITY OF MARYLAND

THESES

1868, 1869

Author	Title	Year
Warren, Edward P.	Abortion	1868
Hoge, G. Dickson	Pneumonia	1868
Hudson, Herbert S.	Cellular Physiology and Cellular Pathology	1868
Banks, James M.	Typhoid Fever	1868
Shields, J. W.	Intermittent Fever	1868
Yost, Peter K.	Respiration	1868
Newbill, William J.	Improvements in Medicine and Surgery	1868
Sweeting, James K. P.	Intermittent Fever	1868
Eckenrode, D. Myers	Typhoid Fever	1868
Thomas, C. Byron	Pneumonia	1869
Juves, James	Fractures	1868
Alston, Bennet P.	Cod Liver Oil	1868
Bayne, John W.	Intermittent Fever	1868
Thompson, Samuel G.	The Circulation	1868
Slingluff, Frank	Progressive Medicine	1868
Waring, John L.	The Physiology of Food	1868

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Author	Title	Year
Tiffany, Louis McLane	The Pathology and Treatment of Cataract	1868
Barron, Charles H.	Pneumonia	1868

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UNIVERSITY OF MARYLAND

THESES

1868-1869

Warren, Edward P.	Abortion	35p.
Hoge, G. Dickson	Pneumonia	22p.
Hudson, H. Herbert S.	Cellular Physiology and Cellular Pathology	22p.
Banks, J. James M.	Typhoid Fever	24p.
Shields, J. W.	Intermittent Fever	18p.
Yost, P. Peter K.	Respiration	28p.
~~Newbille~~ Newbill, Wm. William J.	Improvements in Medicine and Surgery	22p.
Sweeting, J. James K. P.	Intermittent Fever	30p.
Eckenrode, D. Myers M.	Typhoid Fever	36p.
Thomas, C. Byron B.	Pneumonia 1869?	20p.
Juves, James	Fractures not in cordell	16p.
Alston, E. Bennet P.	Cod Liver Oil	17p.
Bayne, J. John W.	Intermittent Fever	30p.
Thompson, S. Samuel G.	The Circulation	28p.
Slingluff, Frank	Progressive Medicine	16p.
Waring, J. L.	The Physiology of Food	31p.
Tiffany, L. Louis McLane	The Pathology and Treatment of Cataract	25p.
Barron, C. Charles H.	Pneumonia	19p.

AN

Inaugural Dissertation

ON

Abortion

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Edward P. Warren

of

Goldsboro' York Co. Penn.

Session of 1867-8

15

WMb
18952

Abortion

By this term we understand to signify the expulsion of a fœtus from the womb when it occurs at a period of pregnancy when the product of conception is not sufficiently formed & developed as to permit its continued existence, and this it is sanctioned may take place at any period from the commencement of pregnancy to the end of the sixth month.

We have three varieties of abortion, founded on the period of its occurrence; thus ovular abortion is the name given when it takes place between the 1st to the twentieth day; embryonic if before the third month; and foetal from the latter date up to the sixth month of gestation.

Abortions most frequently occur during the first three months of pregnancy

Causes

The causes of abortion may be divided into spontaneous and accidental. The accidental causes

are those which are produced by external violence or excitement.
The spontaneous, that which supervenes without apparent cause, may arise; first from the constitution and general health of the mother; second, from disease of the ovum; third, from the condition of the uterus and its appendages.
First, those women of plethoric habit who at their menstrual periods have copious discharges, are exposed to abortion during the first months of pregnancy. Again women of a nervous or irritable diathesis; and those of a sedentary habit, as well

as those females whose occupation require more than common action, will be more or less liable to abort.

Syphilis if it is sanctioned has a great tendency to produce abortion, in such case the mercurial treatment should be instituted, and continued sufficiently long, the pregnancy may continue to the term.

Convulsive diseases are frequently urge abortion.

Second, disease of the ovum.

It is admitted that constitutional relation, may taint the germ by a deleterious principle

which will sooner or later cause its destruction and excite abort=ion.

The placenta may be hypertro-phied, or atrophied, or there may be inflammation excited in the placenta, or its insertion ... the neck of the uterus, as well as too short a cord and disease of the umbilical vesicle may produce abortion.

Third, disease of the womb and its appendages.

Resistence to the expansion from rigidity of the uterine fibres, unnatural contractility of

well as sensibility, or too great laxity and weakness of the neck of the uterus, and uterine congestion resulting from a plethoric condition of the system, may act as predisposing causes to abortion. Beside these causes it is proper to take notice of the numerous diseases to which the uterus is subject, acute as well as chronic; namely, such as tumors growing in the uterine tissue, ulceration of the neck of the uterus whether syphilitic or otherwise; these are considered predisposing causes, tending to favor abortion; and to these causes it is essential

to mention the various displacements of the uterus, such as **prolapsus**, **lateral obliquities**, anteversions, and retroversions,

In regard to the appendages it is rational to conclude that all the diseases to which they are liable may favor abortion, such as adhesions, deformities, displacements, degenerations &c;

Abortion has been found to originate from inflammation of adjacent organs, such as the bladder, rectum &c, from this source the uterus has been excited into action producing abortion:

any unnatural compression impeding the development of the pregnant uterus, or contraction of the pelvis are sources of abortion.

We have now other causes which are termed accidental, such as external influences, and are usually more prompt in their action. These are various and of frequent occurrence; for instance falls, great fatigue, severe contusions, and rupture or puncture of the membranes by the introduction of some foreign object in the neck of the of the uterus, have

as a general rule been followed by abortion.

Falls and bruises may act two ways: either by contusing or irritating the mothers organs or by wounding the foetus, or all these may be combined resulting in abortion

It may be proper to notice that although certain women are constitutionally predisposed to miscarriage may abort in consequence of fright, or any emotion that may be a shock to the nervous system, yet there are others who will suffer

the most acute moral impressions and the most violent physical shocks without any accident whatever resulting.

Symptoms.

The signs indicating abortion vary with the period of its occurrence, and also with its determining cause. When it happens during the first few weeks of pregnancy the symptoms are frequently so slight as to attract but little attention, being attended with very little more pain or inconvenience than usually accompanies a difficult menstr-

=ual period; the connection of the ovum to the uterus being so slight, when contractions of the uterus are incited, the separation is effected and the ovum expelled in mass or shreds enclosed in coagula which is frequently mistaken for a portion of blood; and thus passes by for an aggravated menstrual period.

From the first month up to the sixth month of intergestation the symptoms are more conspicuous, but still vary with the cause of abortion. For instance when this accident has been prod=

-uced by any spontaneous causes previo-
-usly alluded to. The following are some
of the most prominent symptoms
generally taken notice of, namely,
rigors, an increase of the temper-
-ature of the body, a failure of the
appetite, a disposition to vomit,
thirst, a condition of the body in
which most of the animal funct-
-ions are exerted with less prompti-
-tude and vigor than common,
"called lassitude", — cold extremities,
paleness, sadness, depression of spirits,
swelling and lividity of the eyelids,
a sense of sinking in the region
of the stomach, of cold about the

pubes, of weight about the pelvic viscera and external organs of generation, pain in the loins, a frequent desire to urinate which is generally not effectual, a loss flabby condition of the breasts.

These symptoms may be considered indicative of abortion: for when they have lasted for a certain time the pain in the loins become more energetic and extend to the front part of the abdomen, and are renewed at short intervals, finally developing uterine contractions, which if the ulnus be high above the pubes can be sensibly felt to

contract, whilst often a sanious discharge takes place from the vagina afterwards becoming sanguinolent and lastly pure blood.

If the neck of the uterus be examined it is very frequently found hardly dilated, flabby or dilatable, the membranes begin to protrude from the os uteri, and finally rupture; the waters escape, and the foetus and afterbirth are alternately or together expelled.

The foetus generally dies before or during the first pains, in those cases where the cause has created slowly. When abortion is the result of some mechanical cause, it

usually has quite an other course; thus, the expulsion of the ovum immediately follows the accident, which generally takes place at the onset of fecundation. But at a later period the time will vary in many cases from the time of the reception of the injury, up to the time the contents of the uterus may be cast off: the symptoms will be found to differ if the cause has affected the mother's organs or directly influenced the foetus. In the former case, the mother complains after the accident of a sharp pain, either in the region of the loins, or is referred to some point in the

abdomen; the pain may intermit for several days, and again become violently renewed, and follow-ed soon after by uterine contractions, dilatation of the os with discharge from the vagina, at first reddish then sanguinolent and lastly pure blood. If labor continues the foetus is aborted, often living but more frequently dead.

This variety of labor is generally slow, owing to the resistance of the neck of the uterus, and even when the neck offers no resistance, the contractile powers of the uterus may be too feeble to expel the ovum, and it may become engaged in the cervix uteri for a peri

-od previous to its expulsion.

When abortion is threatened in consequence of the death of the fœtus caused by violence, or any agency that may destroy to a greater or less extent the vital connection between the uterus and child, the symptoms assume a marked difference, they usually announce the death of the fœtus, there is seldom pain or inconvenience, all embarrassment of the digestive apparatus vanishes with which women are usually troubled in the first months of gestation; every thing is calm, and seems to resume its natural state; but after the lapse of several days, the perceptible move-

-ments of the foetus, which had up to this time maintained their force and frequency, become weaker, and their recurrence is not so frequent and finally become entirely extinct: the expulsion of the ovum is then certain, because it has become an extraneous body it irritates the walls of the uterus, producing contraction and the expulsion is effected sooner or later. In this case the process progresses in a more regular manner, because the uterus has had time to to prepare itself for the requisite degree of contraction for the expulsion of the ovum: this is however not invariably the case for the foetus has been

known after its death to remain in the womb for two weeks or a month. Where a long time elapses between the death of the foetus and its expulsion, there is generally less hemorrhage than if the premature labor had taken place immediately after the accident.

The symptoms that are noticed in after the death of the foetus are very similar in these cases; thus, in the course of two or three days after its death, the breasts enlarge, the sym plasms of milk fever are manifested, and the breasts are in a condition for suckling, after which they subside and the usual

order is resumed. The dead foetus contained within the womb does not produce any disastrous results to the mother: women have been known to carry their dead foetuses for several months without even suspecting it. [illegible] the dead foetus it is not found putrefied: the solids undergo a peculiar change, and the body is analogous in appearance to one that has been soaked in water for a long time; but if the membranes are ruptured and the expulsion of the foetus delayed, the foetus rapidly putrefies.

Diagnosis

To diagnose with certainty that abortion will ensue after ascertaining that pregnancy is the condition, which is not very liable to be mistaken after the fourth month, though before this period it is often attended with embarrassment. In the early months of pregnancy symptoms of threatening abortion are liable to be confounded with embarrassed menstruation; but it is conceded that in abortion the os uteri is more or less dilated, the hemorrhage is preceded by pain and these persist-

notwithstanding the profuseness of the discharge; whereas in difficult menstruation the os is closed the flow of blood followed by pain and these diminish when the discharge is well established. If it be ascertained that pregnancy is the condition and there is severe pain with hemorrhage rather profuse, softening and dilatation of the cervix uteri, protrusion of the membranes during contraction, it is almost invariable certain that abortion will ensue. After the fourth month the diagnosis will not be so liable to embarrass; the uterus is more dis-

-loped, pain more energetic, hemorrh-
-age more profuse, dilatation of the os
more manifest; and the death of the
foetus renders abortion certain. The
death of the foetus may be ascertained
by ascultation after the fourth mon-
-th, the motion of the child, if felt before
will now be absent; and if the moth-
-ers breasts have been tender or tumid
and then with some suddeness subsi-
de and shrink, with diminution
of the abdomen, and a sensation
of weight and draging in the loins
and hypogastric reigion, we have
then reliable symptoms of abortion.

Prognosis

The prognosis as regards the foetus is inevitable fatal. An abortion occurring during the first two or three months, is decidedly more dangerous to the mother, than in the fifth month.

Delivery of the after birth.

If after the expulsion of the ovum the placenta be retained from some cause or other, Art has to interfere; when its expulsion is impeded by insufficient uterine contractions or partial adhesions of the placenta with closure of

the neck of the uterus, ergot may be given with the view of exciting the contractions, and the expulsion of the secundines; when this fails all that can possibly be done is to wait; at the same time watching the course of nature. Finally the placenta becomes a foreign body in the womb, irritating and exciting its walls into energetic contractions; these tear the uteroplacental adhesions and the afterbirth is almost free in the uterine cavity, the neck dilates and permits its escape or it may be retained in the neck of the uterus,

the proper measure is then to seize it with the fingers and carefully extract it.

The crotchet has been used in case of necessity, and the introduction of the fingers or hand with a view of separating its adhesion which is generally effectual.

Lastly if such resource fail, the tampon must be resorted to at once, and the ergot must be given immediately; for the mutual use of these measures rarely fail to arrest the hemorrhage and bring on a sufficient degree of uterine contraction to expel the foetus

Treatment

The treatment of abortion should consist of measures which are of preventive character — In those which will favor the expulsion of the ovum when preventive measures evidently prove insufficient, and in using and applying the proper remedial agents to the various contingencies which are liable to complicate the case.

As regards the preventive measures, it is the duty of the medical man to combat or destroy any constitutional derangement, or any-

=ious predisposition that is liable to cause abortion, especially in the intervals of gestation

It is of great importance to bear in mind the pernicious effects of Syphilis on the foetus; if there are symptoms of Syphilitic contamination in the mother during her pregnancy, she should be subjected to a mercurial course.

When several abortions have resulted as a consequence of some displacement of the uterus, it should be remedied in the commencement of pregnancy, by avoiding all fatigue and every effort that may have a tendency

to displace the organ. When abortion is caused by rigidity, and excess of sensibility or contractility in the fibres of the uterus, or is caused by excessive weakness or relaxation in the fibres of the uterus; in the former case bathing and general bloodletting, opiate injections, and a course of living or regulated diet - that will not have a tendency to excite the vascular system, are the most appropriate measures; and to the latter a tonic treatment is called for, Sabine is extolled by some writers.

Women of plethoric habit are

have profuse menstrual discharges and who may have previously aborted at or about the period menstruation is about to take place should be subjected before fecundation to a restricted diet; and during gestation avoid all excitement and should remain in the recumbent posture one or two weeks at every monthly period, for several months

Bleeding during the early months of pregnancy where there is a congestive tendency of the pelvic viscera just before the menstrual term is one of the best preventive measures

When constipation has had an

influence in producing so called abortions, the true remedial measures should consist in the timely resource to mild laxative injections.

When abortion has as it were become a constitutional habit - it is thought that rest to the organs for nine or eighteen months would supercede all other means.

When a rupture of the membranes has taken place abortion is inevitable. If the hemorrhage is not of such a character as to endanger the life of the mother in the first or second months of pregnancy nature should not be interfered with. (According to authority the membranes

should not be disturbed, for that would be likely to retard the delivery of the placenta and render the process more dangerous.

At a more advanced period, that is, during the fifth or sixth month the course of the obstetrition is very nearly the same as it would be at term.

Hemorrhage is one of the most common and constant symptoms that accompany an abortion.

It has been suggested that a separation of the placenta may take place at any part of the ovum: if the separation begin at the body or fundus, the blood proceeding from the lesion must increase the mischief

by separating other connecting medium of the ovum and uterus, before it can issue from the ostineae; it will therefor, follow that when this takes place the chance of arresting the hemorrhage and preserving the ovum in proportion to the destruction of the connecting medium. When the separation is near the neck, the mischief will be proportionately diminished.

The first resource in treating the hemorrhage should be to place the patient in the recumbent posture on a matress or even the floor, in a cool room. The patient should be thinly covered. Give drinks, ice and water, cold lemonade. All stimulating articles

should be avoided, her diet should consist of tapioca wine broths, should begin cold.

Refrigerents to the hypogastrium and thighs. for pain opiates, if these measures fail abortion is sure, and the first effort of the obstetrition should be to bring on contraction and expulsion of the uterus if nature effects it sooner than the danger is eminent; the womans strength if exhausted should be supported by stimulants, at the same time ergot should be given. These measures often prove inefficient at an early stage of gestation, for it is then difficult to excite contractions, owing to inefficient development of the

contractile powers of the uterus, the tampon is then the only resource; it acts in two ways; by opposing hemorrhage externally, and excites uterine contraction.

The use of the tampon in the early months of gestation is objected to, as an irritant to the uterus. But in truth it is often advantageous because the cessation of flooding is always a necessary consequence of uterine contractions and the child in most cases is dead before the application of the tampon, and yet its application experience has taught is not always followed by abortion. The tampon should not be used after the fifth month even during the fifth month there is danger of converting an open into a concealed hemorrhage.

If the complete expulsion of the fœtus, the patient must observe the same precautions as after ordinary [illegible]

An

Inaugural Dissertation

on

Pneumonia,

Submitted to the examination

of the

Provost, Regents, and Faculty

of

Physic,

of the

University of Maryland,

for the degree of

Doctor of Medicine.

By

G. Dickson Hoge.

of

Virginia.

June 1847.

In conformity to one of the statutes of the University of Maryland, it being a requirement, in order to obtain the degree of Doctor of Medicine I propose to consider in the following pages the subject of Pneumonia.

The term Pneumonia, or Pneumonitis is used to signify an inflamation of the substance of the lungs, or the lung tissue. It has been divided, in its description, into several varieties according as the inflammation has attached some particular

part, or tissue. for instance there is lobar pneumonia in which the inflamation is confined to a single lobe of the lung at one time, and lobular where it is confined to particular lobules. Then we have interlobular and intervesicular, also vesicular which is simply inflamation of the minute air cells themselves. As in it the whole parenchyme of the part is involved I will only speak of common lobar pneumonia. I will first consider the anatomical

characters of the tissue as a consid
eration of them is especially essential
in order that we may appreciate
properly the various symptoms which
present themselves at its different
stages. An examination of a lung
of a man who has died of Pneumonia
will show that progress of inflamation
is marked by three distinctive stages
The first is that of congestion, or
engorgement, second the stage of
red hepatization as it is called be-
cause it resembles at this point the

appearance of the liver. third the stage of gray hepatization, or the suppuration stage. In the first stage there is hyperemia, or excess of blood. the lung is red, and when an incision is made through it the blood flows freely, mixed with more or less serous liquid. It is heavier than when in health, crepitates very slightly, will still swim in water.

It is not easy to descriminate the appearance of this period from the mechanical congestion found in depending portions of the lung

after death. The occurrence of the hyperemia however at a portion of the lung which is not dependant is contrary as to its character. This condition is of short duration and if the parts do not return to their normal condition soon pass to the second stage that of solidification. Lymph and other matters are exuded from the blood vessels and fill up the cavities of the air cells the lung is now still more increased in weight from being an entire absence of air cells

sink in water, it is friable readily giving way under pressure, cut surfaces present a granular appearance. This may pass into the third stage or the stage of purulent infiltration. The lung now presents a greyish appearance, pus is formed in the vesicles, the tissues of the lung are very friable, will break down under the slightest pressure, when an incision is made the pus will freely flow from it but sometimes occasionally there are collections of pus

forming what is called pulmonary abscesses, still more rarely gangrene supervenes. This latter is an extremely rare occurrence, death generally occurring before it. I have had an opportunity however of seeing two cases in which it existed, during the present session, at the Baltimore Infirmary. They were two very interesting specimens exhibited to the class by the distinguished professor of General Pathology T. Donaldson

By the inspection of these I have been enabled to give a description of every stage of the disease. Every stage may and generally does exist at the same time. Before giving the symptoms of the disease I will note some peculiarities connected with its invasion. It has been observed that in a large majority of cases it invades the right lung as if in preference and that the lower lobes are most generally invaded first. The effla-

nation of this has been satisfactorily given, I will now proceed to enumerate the most prominent symptoms and signs. The attack is usually ushered in by a chill coming on without any premonitory symptoms with it, or very soon after there is considerable pain, this is acute and lancinating, increased on inspiration, very soon sometimes, often confined to one spot, this last is an important diagnostic symptom. It depends upon accompany

ing pleuritis which is very common
Pleurisy sometimes does not exist
which accounts for the absence of
pain in a certain number of
cases. Cough usually comes on
with the invasion, sometimes it
is absent, there is more or less ex-
pectoration, it is at first scanty
clear, and viscid, finally it is
ultimately mixed with a little
blood which gives it its characte-
ristic rusty color. The expec-
toration is by no means uniform

in its character, sometimes it contains a considerable quantity of blood, when this blood is of a dark color it is called the prune juice expectoration, in a portion of cases expectoration is entirely absent. There is more or less febrile excitement with pain in the head anorexia, thirst prostration, &c. The pulse is increased in frequency often amounting to as many as one hundred pulsations in a minute, the temperature

of the body is raised several degrees.
in the severest cases it goes as high
as 105-0 F. The respirations are also
increased in frequency owing prob-
ably both to the accompanying
pleurisy, and the imperfect ae-
ration of the blood in the affected
lung. These symptoms which I
have enumerated are the most
important which occur during
the commencement, or the first
stage, in the second stage there
is a slight modification of these

symptoms, there is less cough, ex
pectoration is more abundant,
loses its color somewhat, be-
comes less viscid, the pain is de-
creased in severity, febrile move-
ment is also luminished, there is
little or no change in the respi
rations. I have now accompa
nied the disease through two
of its stages, the next is the third
which may be either one of two
results, resolution or suppuration
more commonly the former in

which case all the symptoms rapidly decline and the patient goes on to recovery. The latter result that of suppuration is of far more serious import, though it is not necessarily a fatal result. The frequent and feeble pulse the frequent respirations the purulent expectoration the progressive debility of the patient denote the approach of death which is by asthenia. I must not omit to speak of certain

physical signs which evince themselves upon percussion and auscultation and which are of considerable importance in aiding in the diagnosis In the first place there is very slight dullness on percussion, and what is called the crepitant rale may be heard by the application of the ear to the chest this latter exists but a short while. When consolidation takes place there is decided dullness, you do not hear the crepitant rale nor notice

there is a fresh portion of the lung
invaded at the same time but
we have other sounds supervening
which are called the broncho vesic
ular murmur, bronchial respira
tion, bronchophony, whispering
bronchophony &c. In the suppurative
stage there is still dullness on
percussion the bronchial rale;
owing to the passage of air through
pus, and if there have been ab
scesses cavernous respirations.
Having considered the most im

portant signs and symptoms
I will now briefly consider
the causes which give rise to
them. It is almost universally
the result of continued exposure
to the vicissitudes of the weather
a strong proof of this is the
greater frequency of its occur-
rence in the winter months, and
in cold climates, and it attack-
ing those who are most exposed
to the inclemencies of the weather.
Occasionally it is the result of injuries.

Prognosis. Pneumonia of itself is not a dangerous disease unless it is rendered so by complications or by injudicial treatment. Of 750 cases reported by Dietyl of Vienna there were 69 deaths but not one of them was devoid of complications. Other statistics show the same relative results. So the amount of danger I think is in direct proportion to the amount of complications and to the bad treatment which I am

loth to confess has prevailed a-
mong the professionth a consid-
erable degree. I will now proceed
to lay down the plan of treatment
which in my judgement seems to
be the most rational and suc-
cessful one which has been adopt-
ted. In the first place I would
say that I consider bloodletting
and all other depressing remedies
to be decidedly injurious onth.
contrary the patient should be
supported. The tendency whol

the disease has to lower the powers of life should be counteracted by stimulants and good nourishing diet. When there are complications, of course the treatment will vary according to the nature of those complications. But uncomplicated pneumonia will require little else than nourishing diet and a little stimulation. Beef tea and chicken soup as much as the patient can take and assim

ilate well, and wine or brandy as the case may require. After the second stage blisters over the affected part may be of service. I have seen several ~~case~~ severe cases recover under this plan of treatment under the care of Prof Donaldson. The recovered with a remarkable degree of strength considering the extent of the disease. I believe this to be the best plan of treatment

that has been adopted by either ancient or modern Physicians.

Having concluded what I have to say upon the subject of Pneumonia I now respectively submit my remarks to the consideration of those, whose duty it will be to examine them.

AN

Inaugural Dissertation

ON

Cellular Physiology and Cellular Pathology

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Herbert Seaton Hudson

of

Cahaba Alabama

Session of 1867-8

Cellular Physiology
and
Cellular Pathology

In the diversity of forms which compose
the animal and vegetable kingdoms, a
constant and uniform expression of life in
its plastic or formative relation to matter is
alone to be found in the organic cell.
From the humble Protophyte of the waysides
ditch, to the lordly Phanerogamia of the
forest: from the Protogen to the Vertebrate
all alike are the offspring of this parent-
form - within itself possessing vital endowments
of the most varied and wonderful nature.
The cosmos is not the less true in the
inorganic kingdom, in the innumerable

products of which nature seems unable to deviate from simple molecular aggregation as in amorphous and crystalline forms. To what cause we must attribute these constant manifestations of organic and inorganic types is indeed difficult to answer, were we to hazard an explanation, we would say that the former seems due to the operation of a force within the cell while the latter is the result of passive impressions from forces extrinsic to the atom of which they are composed. But be this as it may to us the significant

fact is that Organic life is universally
associated with the Spheroidal form, and that
the Cell is the visible unit of the primitive
Organization. We also may say that
it is the primitive Anatomical Element-
Containing within itself the source of its
Organic activity. "beyond which we need
not expect to find from whence life proceeds."
The importance of the recognition that Organic
life has a definite and Local origin in
each cell cannot be overestimated. and
it is by the aggregation of cells in the various
Organs of the Animal and Vegetable form

together with those Vital Impressions which determine the particular Specs which constitute life. In a consideration of which from a physiological point of view. The importance of a knowledge of the organic as distinct from animal life or the life of relation will be apparent for to it we trace the plastic transformations from the inorganic to the organic in the Vegetable and the Specific appropriation in the Animal kingdom. It is in the vegetable kingdom that the greatest effection of this plastic force is manifested and when

the primary transformations of material for animal life begin, so that the Chemical Elements the Carbon, Nitrogen, Hydrogen, Oxygen &c are withdrawn from the inorganic world and combined into the constituents of the tissues of living bodies. It is not necessary to enter into a minute description of the cell and its contents, but sufficient to state that its form is more or less globular except when modified by pressure when it may be flattened as in Scaly epithelium, elongated as in cylindrical epithelium, fusiform as in Muscular fibre, or stellate

as in the Sarcina and Bacillicles of bone.
In size the cell varies from $\frac{1}{300}$ to $\frac{1}{1000}$
of an inch in diameter, and consists
of a limiting membrane, nucleus and
contents (fluid or solid). From the uniformity
of the composition and properties of the
limiting membrane its principal function
seems to be to protect and bound the
contents, and by osmosis supply the
necessary conditions for waste and repair.
The primary force effecting which is generally
regarded as being the peculiar office of
the Nucleus, - while in the cell contents-

may be due to reside the functional dignities of the cell in its relation to the organism at-large.- To Schwann is the credit due of having first pointed out the cellular origin of the tissues. but to the eminent Prof Virchow of Berlin we are indebted for the only complete and satisfactory account of Cell genesis. upon which to base Histological Science. so long as cell formation was supposed to take place spontaneously or out of a Molecular Blastema (as Schwann asserted), or that the tissues were formed according to the fibre theory of

Haller it was difficult to assign organic force to the cell alone but rather to something beyond. Now we know according to Prof Virchow that the tissues are true cell formations the nuclei of which are persistent and maintain their functional activity during the life of the tissue, each cell possessing a definite idea of action beyond itself. This being true much of the importance which has heretofore been attached to the action of the vessels is removed, and their proper function as simple carriers of the blood better understood. Prof Virchow proposes the following simple

Classification of the tissues. 1st Those in which the cells lie close together as in Epithelial tissue. 2nd Those in which there is more or less of intercellular substance as in fibrous tissue. Areolar tissue. &c. included under the name of Connective tissue. 3rd Those which are peculiar to the animal economy as in the Nervous and Muscular Systems Vessels &c. The importance of Physiology and more particularly Histology in their relation to Pathology is beginning to be understood and there is reason to hope that we will have a definite idea of what constitutes

disease, when we know what is health as it is constituted by the normal activity of the tissues of which the various organs are composed.) It is not enough that we trace disease to organs or nerves, but we must go beyond, and enquire What? of the Cells, as the expression of normal and abnormal conditions can alone be found in it from whence both proceed. The formula of Prof Virchow that "Omnis Cellula e Cellula," applies to Pathological formations as well as Physiological ones, and the happy theory, that every Pathological Structure

has it Physiological Prototype" and that
a "there are no genuine Neoplasms" must
deny conviction to every Thinking mind
for "it is against all known laws of Origin
that anything can produce itself, de Novo."
It may be safely said that every diseased
condition, must be ultimately traced from
a departure from the normal nutrition or
function of the cells of the parts and that
indeed if the cells the tissues & fluids
disorders and organic diseases have no
foundation in fact, for it is equally impossible
to conceive that a function & disorder can

exist without a cause, as that anything can produce itself de novo, for that cause we must look in the components of the tissues, again in those phenomena which characterize the disturbance of nerve force can we conceive that they form an exception to this law, for we are well aware of the intimate connection of the nervous stimuli with every vital change in the body, and that the constant action of this force is one of the conditions necessary to their occurrence. So that even in Collapse, or Syncope, we may well conceive that death is the result, solely by its effect on

the components of the tissues, in the former by exhaustion of nerve force and in the latter by arrest of the nutritive material. It may be and no doubt is in great part from arrestic nutrition or innervation, that death takes place in those diseases of Toxaemic origin, perhaps no inquiry is of more importance to us than the pathology of the Zymotic diseases, that the fluids of the body are the seat of disease as well as the solids need not excite our surprise, and it is in those ~~of~~ included under the term Zymotic that most accord with what we know of the nature and use of the blood.

the sudden invasion of the system. the rapidity and severity of the attack, the self limited duration, and the inefficiency of local lesions in fatal cases point strongly to the blood as the true seat of these diseases, - and a priori we would suppose that possessing feeble vitality, and a low degree of organization it is eminently fitted for change by catalytic influences. on the other hand it is difficult to conceive that a permanent dyscrasia can reside in the blood, and it seems probable that many of the diseases at present regarded as of blood origin will be found

to have their localization in the tissues themselves.
Of this nature may be said to be those
hereditary Cachexia, Tuberculosis, Syphilis,
(Secondary) Cancer &c. perhaps this will not
be determined until physiology shall be able
to say whether the Genesis of the blood is by an
inherent power, or is the result of processes from
without, recent investigations especially those
of Virchow tend to show that to much importance
has heretofore been assigned to the blood,
and that while it is the pabulum out of
which the tissues are formed, the organizing
forces reside in the tissues only.

If it be contended, that the blood globules in embryonic life have nuclei and have been observed to multiply by division, it is not the less true that they are then formed by the cells of the germinal structure, and that a sufficient difference has been observed between them and the permanent globules to infer that they serve but a temporary purpose in the economy, and disappear when no longer necessary by the expiration of the second month, it is probable then that the elaboration of the blood is the result of the combined functional activity of the organism only

and that the changes which are being
continuously effected in it are due to the action
of the organs through which it circulates. any
deviation therefore from a normal composition
must proceed from those organs in the tissues
of which the plastic forces reside. A marked
difference in the nature of the diseases included
under the term Zymoses and those occurring
from hereditary causes, consists as before stated
in the duly limited nature of the former, and
of the indefinitely progressive and destructive
nature of the latter, again the diminutive
stage in the former, when not destructive of

the functions of the part, is a relief to the system, while in the latter no such elimination takes place; Cells may be said to possess in addition to the nutritive force expended in their own maintenance, a functional activity which characterizes their special office in the economy, as in the Gastric follicles of the Stomach, biliary Cells of the lobules of the liver, &c. that this functional action may be impaired without, their nutrition being also interfered with is probable, but the imperfect exercise of such specific action must proceed from the Cells. If it be true that disease must be traced

to its source of origin in the Cell, and that Pathology must be recognised in the Cell where so also must Therapeutics. and the effect of remedies be looked for in their action on these components of the tissues. In the present state of our knowledge it cannot be said that we know the definite action of any one remedy. perhaps if any claim to such knowledge be made the curative action of Iron in Anemia may be pointed to.

Before medicine can attain an position worthy the appellation of a science or of its beneficent purposes and ideal

position, it must be indelibly grounded in an enlightened Physiology. Much has been achieved already in the emancipation of the human mind from those dogmas of the past generated by ignorance of the cause and nature of disease, and with increased knowledge remedies formerly regarded as specifics have been assigned a more rational position in Therapeutics, indeed it is impossible to conceive that any remedy possesses specific powers beyond those which are the ~~result~~ result of its Physical or Chemical action, and which determines its effects upon the particular tissues.

To the supposed hidden and mysterious action of certain remedial substances, as antagonistic to the peccant fluids or solids which were the supposed cause of disease, must be attributed the undue importance which has ever been attached to Pharmacological remedies, and also the cause of so much abuse in their use.- It will be well however if at the present day we do not err in an opposite direction, and having supplied the conditions of health trust to Natures efforts alone, instead of looking to every means of assisting her in her work of restoration

from disease. Much of the reproach that is contained in the remark of the late Prof Trousseau that "Rationalism in medicine leads only to absurdities." may perhaps be said to be due to the fact that Rationalism in medicine can scarcely be said to exist.

AN

Inaugural Dissertation

ON

Typhoid Fever

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

James M. Banks

Of

North Carolina

Session of 1864 & 65.

The term Typhoid is derived from two Greek words, τιφος and eidos signifying typhus-like, and is applied to one of the Idiopathic continued fevers from its resemblance to typhus fever. Typhoid fever is not confined to this country, but prevails more or less throughout the world, though known by different names in different countries; and although not a very fatal disease, yet from its wide field of prevalence, and the serious complications which are apt to be developed, it demands careful study and attention by the physician, in order that the resources of modern therapeutics may be judiciously employed in conducting it to a favorable termination. We will now proceed to the consideration of its characteristic lesion.

Anatomical Characters.- The seat of the lesions which are peculiar to this disease is in Peyer's glands, in the portion of the small intestine denominated the ileum. At first the mucous membrane is injected, and soon after the glands become enlarged

from the presence of a deposit within called the typhous material; this deposit first taking place in those glands nearest the caecum, and then successively in those above. This occurs early in the disease, and the patches are elevated one or two lines above the surrounding surface, and the mucous membrane covering them is of a pinkish or purplish color. The next change that occurs is a process of softening and ulceration of the deposit and glands, commencing about the second week, first in the glands nearest the caecum, and then travelling upwards. As a general rule the ulceration extends entirely through the mucous membrane down to the muscular coat, but in some exceptional cases it extends through the muscular and peritoneal tunics, giving rise to perforation with the escape of the contents of the bowells into the peritoneal sac, producing peritonitis one of the most fatal complications.

The ulcers present a shelving border, and an unhealthy [illegible]

ance before the process of cicatrization commences. Cicatrization usually commences during the third week of the diseases, first in the glands nearest the caecum, and is in progress during convalescence. There is formed a thin serous-like membrane at the bottom of the ulcers, which gradually thickens and fills up the excavation, but the glands are never reproduced. It should have been remarked that this cicatrizing process never interfers with the proper calibre of the canal. This same defect occurs also in the mesenteric glands, and although in some instances it softens and ulcerates producing perforations by being discharged into the peritoneal cavity, yet in the great majority of cases it is reabsorbed. The lesions above described are peculiar to, and characteristic of Typhoid fever, but it will now be proper to notice some accidental lesions. The spleen is very often found enlarged and softened, and also though less frequently the liver is found in the same condition. The

kidneys are sometimes found diseased on post mortem examination, and the heart is sometimes softened and flabby. The lungs and bronchial mucous membrane have been found congested. Inflammation of the brain or its meninges is very rare, yet effusions within the ventricles, and into the arachnoid cavity, and subarachnoid space are often found after death. Fibrinous clots have been found in the heart, especially when pneumonia exists as a complication. The blood is dark and fluid, and the fibrin is diminished, unless there be a local inflammation complicating the disease. There is scarcely an organ in the body that has not in some instances presented evidences of a diseased condition after death.

Clinical History.- Typhoid fever sometimes begins abruptly with a chill, which is soon followed by febrile movement, but in the majority of cases it comes on gradually and insidiously; the usual symptoms of this forming stage being

lassitude, general uneasiness, irregular chilly sensations, frontal headache, mental irritability, anorexia, looseness of the bowells, and frequently epistaxis. After a period varying in duration in different cases the muscular debility becomes so great, that the patient is compelled to assume the recumbent posture, and the disease becomes fully developed.

For convenience of discription it will be proper to divide it into stages of septenary periods; and also to speak of the symptoms under distinct heads, according to the system to which it is referable.

Countenance and General Aspect.— In the early part of the disease the face is generally flushed, the countenance dull, listless and stupid, and the surface more or less dusky or dingy, owing to defective cubillary circulation; but this discoloration is not so marked as in typhus fever.

Nervous System.— There is pain in the head and back

early in the disease, but it becomes less as the disease advances, and finally ceases. Delirium occurs in the majority of cases of this disease, usually making its appearance in the second week. It differs in degree in different cases, being sometimes noisy and active, and requiring restraint; whilst in the majority of cases it is of a low muttering character. It is more marked during the night than in the day, and its prominence is in proportion to the intensity of the disease; and when noisy and active it is an unfavorable symptom; but whether passive or active it affords no evidence of cerebral or meningeal inflammation. The mental faculties are feeble, and the patient pays no attention to what is going on around him, and is indifferent as regards his own condition on account of diminished perceptibility. General and special sensibility is impaired, and deafness is a common symptom. As a rule the patient is wake-

full in the early period of the disease; afterwards he becomes drowsy and appears to sleep, but in reality does not; this condition being called pseudo-somnolence, or coma-vigil which signifies false sleep, and is apt to exhaust the patients strength, and should be combated by appropriate remedies. This condition of coma-vigil is not one of true coma, but in some instances coma occurs and is an exceedingly unfavorable symptom, leading to death by apnea or the deprivation of the tissues of oxygen. Subsultus tendinum and carphologia or picking at the bedclothes are grave symptoms, which are sometimes observed during the progress of this disease. Convulsions sometimes occur, though very rarely, and when present, they are due to uraemia.

Digestive System.— As a general rule there is anorexia, but in a few exceptional cases the appetite is not entirely lost.

There is great thirst, but very often in the progress of the ca

case, owing to blunted perceptibility, the patient does not complain of thirst, though the system may be suffering for the want of water. The tongue is coated with a yellowish or brownish fur, which may often only covers the central and posterior parts, while the tip and edges are red. It is said that when the fur gradually recedes from the tip and edges, and the tongue becomes clean, it denotes that convalescence will be speedy, whereas if the fur is thrown off in flakes commencing in the centre and the tongue becomes clean and moist, it also denotes convalescence, but it will be tedious and protracted. Sometimes in the course of the disease the fur is thrown off and leaves the tongue smooth, dry and glazed. This condition, according to Prof Wood, indicates an increase of the morbid conditions going on in the glands within the intestines, calling for special therapeutic measures which will be mentioned under the head of treatment. A dark matter called sordes sometimes accumulates upon the teeth, especially in unfavorable cases.

In some instances the parotid glands become enlarged in the course of the disease; though this is rare, yet I have had an opportunity of observing this complication in a patient who passed successfully through a severe attack; suppuration took place, and the abscess was allowed to burst spontaneously, and it left an ugly cicatrix after it had healed. Vomiting is an occasional symptom, but is very much less prominent than in remittent fever. Diarrhoea is a prominent symptom, and it is so rarely absent as to be considered one of the most valuable diagnostic symptoms. It sometimes precedes the development of the disease, and is continued throughout its course; whilst in other cases it is developed with the disease. This is considered by some as a salutary effort of nature to eliminate the poison from the blood, and consequently should not be checked, unless it be so profuse as to be sufficient of itself to exhaust the strength of the patient.

The evacuations are fetid, and of a yellow, ochre color, and very thin; they are sometimes dark colored, as in the case which I saw and alluded to above. Hemorrhage from the bowells occurs in some instances, but it is not such an unfavorable symptom as might be supposed. Tympanitis of the abdomen is very often present, and is considered to be one of the diagnostic symptoms. There is usually tenderness on pressure and a gurgling sound heard in the right iliac region, which are due to the diseased condition in the lower part of the ileum. In some rare cases perforation of the small intestine occurs from the extension of the ulceration through the muscular and peritoneal tunics; the large intestine is sometimes perforated, though this is still more rare. When perforation takes place hemitonitis becomes rapidly developed from the escape of the contents of the intestine into the peritoneal cavity;

it is distinguished by the sudden development of acute pain which radiates over the abdomen, the extreme tenderness on pressure, the increase of the tympanitic distension, frequent and thready pulse, the anxious expression of the countenance, obstinate vomiting, and great prostration of the vital powers, and is almost always fatal. Peritonitis may be the result of sloughing of the mesenteric glands, and though not so unfavorable as when due to perforation of the intestine, nevertheless it is very often fatal.

Skin.— Under this head will be noticed a characteristic eruption consisting of isolated papulæ of a rose color appearing on back, chest, and abdomen; they are distinguished from the eruption occurring in typhus fever by the fact that those occurring in the latter disease are papulæ; whereas those appearing in typhoid fever belong to the order of papulæ. These little papulæ on

about fifteen or twenty in number, of a rose color, disappearing under pressure, of an oval form, and elevated one or two lines above the level of the surrounding skin; they usually appear about the seventh day, and when present, they are of some value in a diagnostic point of view; it is very frequently wanting. Sometimes in the progress of the disease little clear vesicles called sudamina appear on the neck, chest, and shoulders and sometimes on the abdomen.

As a general rule the skin is dry, though in some cases perspiration occurs during the course of the disease; and it is very apt to slough over prominent parts that are exposed to pressure as the sacrum, and this condition should be obviated by prophylactic measures.

Circulation and Temperature. - The pulse is frequent ranging from 90 to 120 or more per minute, and is full in proportion to its frequency; when it rises above 120

pulsations in the minute it is an unfavorable symptom. There is a diminution in the force of the heart's action, and the first sound is often notably lessened. The temperature of the body is augmented, and by observation it has been found to increase progressively for the first half of the first week, rising two degrees in the evening, and falling one in the morning, until the thermometer stands at 103° when placed in the axilla; an increase of temperature above this point is unfavorable, and should it reach as high as 106° to 108° Fah., it indicates the approach of death. When there is going to be a favorable termination of the disease the thermometer falls, and is usually 4° or 5° lower in the morning than in the evening. The gradual increase of temperature for the first three days, being about one degree higher in the evening than in the morning, is said to be characteristic of this disease, and the thermometer is rendered useful in diagnosis as well as in prognosis.

Genito-urinary System.- During the progress of the disease the urine is scanty and high colored, with an increase of its solid constituents in the form of urea and uric acid; there may be found albumen in some instances and it denotes gravity of the disease. In those cases complicated with disease of the kidneys renal casts are sometimes found, and there is danger of uraemia from deficient elimination of urea, which is in excess in the blood, owing to greater waste of tissue going on, and this condition will certainly lead to death, the fatal issue being generally preceded by convulsions and coma. Owing to the impaired perceptibility of the patient the urine often accumulates in the bladder and may cause paralysis from over distension, and ultimately give rise to uraemia; the liability to this condition should be borne in mind, and the physician should employ the catheter from time to time to empty the bladder if the urine be not voided by the efforts of nature

Respiratory System.- Most of the symptoms which are referable to this system are due to complications, as for instance the cough is generally due to subacute bronchitis, and if the respirations are very much increased in frequency it would lead us to suspect disease seated in the respiratory apparatus, pneumonia for example, which is a frequent complication of this disease, though the respirations are sometimes increased as in other fevers, without the existence of pneumonia.

Complications.- Subacute bronchitis is a frequent complication, recognized by cough with sonorous and sibilant rales in the early stage, while in the latter stage they give way to the moist, mucous, and subcrepitant rales. Pneumonia is known by the increased frequency of the respirations and by the moderate dullness on percussion, and the crepitant rales in the early stages; while in the second stage of the complicating disease there is complete dullness, and entire

absence of the vesicular murmur, bronchial respiration and bronchophony. Disease of the kidneys and enlargement of the spleen have been spoken of under the head of anatomical characters; laryngitis and oedema of the glottis are sometimes observed. The duration of this disease is variable, reckoning from the period of full development, its average duration is about three weeks, though it frequently extends to the fourth week, and in some cases convalescence has taken place in the second week. The convalescence, as a general thing, is gradual, and is sometimes tedious, and relapses may occur. Typhoid fever may be associated with other diseases as Scarlatina, rubeola, typhus fever, diphtheria, and remittent fever; this last combination of diseases is very frequent in my own section of country, and is called typho malarial fever.

Sequels.- The hair is apt to fall off, and sometimes there is

progressive emaciation finally resulting in death, and in other cases the nutritive function becomes more active, and the individual may attain to greater weight than before. The mental faculties are often left in an enfeebled condition, and it is generally some time before they completely recover their normal power.

Causation and Pathology.— Typhoid fever is endemic in all countries though not known by the same name; in malarious districts it is generally associated with the [illegible] fevers, most commonly with that form known as the [illegible] remittent fever. It is said to be most rife in the autumnal season than any other, and especially so if the preceding summer was hot and dry. Young people are more liable to the disease than any other class, because the glands of Peyer disappear in advanced life. It is an undecided question whether it is contagious or not, some believing that it is, while others hold to the contrary opinion.

Dr. Flint believes that under certain circumstances it is contagious, while under ordinary circumstances it is not contagious.

Typhoid fever is a disease of the blood, and is classed among the Zymotic diseases, that is, a disease produced by a special cause, which entering the circulation, acts on the blood as a ferment; inducing such changes in its composition, as to render it unfit to carry on its part in the function of nutrition. Any thing which depresses the vital powers renders the system more susceptible to the action of this special cause.

Diagnosis.- The diseases with which this one may be confounded, and consequently requiring the consideration of the differential diagnosis, are typhus fever, remittent fever, meningitis, bronchitis, pneumonia, acute tuberculosis and enteritis. It may be distinguished from typhus fever by observing the presence of the abdominal symptoms such as diarrhoea, tympanites, and tenderness in the right iliac region; and the rose colored eruption being papular; whereas

in typhus fever these abdominal symptoms are not present, the eruption is macular, the surface more dusky, delirium is developed earlier, and a peculiar odor emanates from the body. From remittent fever it may be distinguished by the presence of those abdominal symptoms mentioned above, and which are so characteristic of this disease, epistaxis, and the absence of remissions. It may be mistaken for acute meningitis when occurring in children, without proper caution being observed, it may be distinguished however by noting the fact that in the latter disease the pain is more severe, there is great intolerance of light and sound, delirium is more active, and comes on earlier, and is succeeded by coma, and vomiting is a prominent symptom. When bronchitis exists as a complication and the fever is mild it may be overlooked, but as a general rule it is hardly ever mistaken for bronchitis. If pneumonia be a complication, this may be distinguished as the primary disease by ascertaining that it was insidious in its approach, and that

the development of the fever preceded that of the local inflammation. Typhoid fever is distinguished from acute Tuberculosis by its characteristic abdominal symptoms, and by the absence of frequent respirations, subcrepitant rale, cough and hemoptysis which are present in the latter disease. It may be difficult sometimes to distinguish this disease from enteritis in children, but we should settle the diagnosis by observing its gradual development, the epistaxis, rose colored eruption, and the use of the thermometer, which, as before mentioned is useful as a means of diagnosis.

Prognosis.— This disease, though serious because even in the milder cases circumstances are liable to occur to render it fatal, is not a very fatal one. It is seen that the prognosis is more unfavorable in the middle aged than in young persons. When it terminates fatally the mode of dying is by asthenia, or asthenia and apnea combined when death is preceded by coma. The following

are some of the unfavorable prognostic symptoms: great frequency of the pulse and prostration, notable weakness of the first sound of the heart, and such nervous symptoms as picking at the bedclothes, subsultus tendinum, active delirium and coma; while on the other hand the absence of these symptoms makes the prognosis more favorable.

Treatment.- Typhoid fever cannot be cut short by any known therapeutic measures, and therefore the expectant mode of treatment should be adopted. At the onset of the disease the bowels should moved by a mild laxative, as ʒj of the sulphate of magnesia, or ol. ricini fʒj, or an enema should be used for this purpose and is preferred by some; and then refrigerant diaphoretics such as neutral mixture, or effervescing draught to abate the fever. Sponging the surface with cold water is very efficacious in a baking fever, and it contributes much to the relief of the patient; it should not be employed however unless the skin be hot and dry.

If the diarrhoea be excessive it should be restrained by opiates and astringents; opiates are useful also to quiet the patient when restless and delirious, and to procure sleep; because continued wakefullness is apt to exhaust the patient. Hydrochloric acid is highly recommended in the dose of ten drops every four hours; it acts beneficially by correcting the superalkalinity of the blood due to an excessive amount of ammonia. Dr. Chambers says that it relieves the diarrhoea, cleans the Tongue and abates fever. Dr. Wood highly extolls the use of oil of turpentine when the tongue is smooth, glazed and dry; he supposes it to act both as a stimulant to the system and as an alterative to the diseased mucous membrane of the alimentary canal. There is one condition in which is peculiarly efficacious, namely, when the Tongue throws off its fur in flakes beginning in the centre or back part, which indicates an increase of the disease in the intestines; it is given in doses of five to twenty drops in mucilage every two hours.

Alimentation is of the utmost importance in this disease, and without it medication will be of no avail in the severe cases. The diet should be concentrated so that there may be as much nutriment in as small bulk as possible, such as beef tea, or chicken tea, and milk. Alcoholic stimulants are highly recommended and the system, as a general thing, is tolerant of their use. Alcohol supplies the place of a certain amount of food, and when given in connection with food it makes it go further in repairing the waste, and thus aids in sustaining the failing vital powers. Tonics are very useful both to aid the stomach to digest the food, and to give tone to the system at large; and for this purpose quinia is for probably the best. The patient should be surrounded with as favorable hygiene conditions as possible, and the physician should see that cleanliness and ventilation are strictly observed. The physician should examine the bladder from time to time, and should it be found distended, the catheter should be used.

Preventive measures against bed sores should be adopted and for this purpose a solution of bichloride of mercury in alcohol or the proportion of grij to alcohol ℥j will be found useful; when bedsores do occur, great benefit will be derived by washing them in a solution of chloride of soda or Labarraque's solution in proportion of ℥j to aqua ℥j. When complications arise of course measures must be adopted appropriate to the particular disease which complicates this disease. In writing this thesis I have endeavored to be as clear and concise as possible, without attempting to advance any original or new ideas, which I think would be worthless, even if they could be given. It is for the teacher to advance ideas and theories, while it is the students duty to receive them.

AN

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PHYSIC,

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DOCTOR OF MEDICINE,

By

J. W. Shields

Of

Terre Haute, Indiana

Session of 1857

Typhoid Intermittent Fever

[illegible]

restlessness; with also still scanty but high colored urine.

Soon moisture steals o[illegible]

[illegible] After this exalted action abates, thirst [illegible]

[illegible]

day as the disease progresses becomes very [illegible].
long & sometimes they get under the [illegible]
called [illegible] the paroxysm [illegible]
that the disease is [illegible]
those cases in which the [illegible]
long it is apt to be quotidian [illegible].

An empirical form yet deserving men-
tion is when the paroxysms dont seem to follow
any definite order or habit and is called erratic.
The duration of this disease is variable, from a
few paroxysms to many months or even years.
Indeed it seems [illegible]
the [illegible]
[illegible]
[illegible]
[illegible]
[illegible]

[illegible] seasons of the year most common to this disease are spring and fall. There [illegible] to these. The agues of fall are most severe and dangerous. The [illegible] of the producing [illegible] to the decay of [illegible] that period. It is said that the [illegible] is the most common form in spring and the Quartan in autumn. All ages of life are susceptible to [illegible] subject to it, [illegible]

[illegible]

It is a specific poison producing specific effects

[illegible]

[illegible] up its use [illegible]

[illegible]

[illegible]

The state of the [illegible] [illegible]

general [illegible] [illegible]

The Sulphate of Bebeerin and Strychnia

are also good remedies

Though [illegible] the [illegible] [illegible]

of arsenic [illegible] more [illegible] [illegible]

cases [illegible] those [illegible] [illegible]

[illegible] and if [illegible] [illegible]

very likely to occur [illegible] [illegible] of [illegible]

cachexia [illegible] [illegible] [illegible]

[illegible] combi[illegible] [illegible]

[illegible]

[illegible]

[illegible]

to allay excitement by [illegible]

[illegible]

It is very well established that [illegible]

[illegible]

[illegible]

to malaria [illegible]

Tonics [illegible]

[illegible] attack [illegible]

hygienic means, [illegible]

[illegible]

to another part of country

[illegible]

possibly continuance of the cinchona preparations

counter irritants [illegible]

[illegible]

AN

Inaugural Dissertation

ON

Respiration

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Peter K. Yost.

of

Shrewsbury Penna.

Session of 18[illegible]

The animal kingdom is subject to waste and repair from the time life begins to the time it ceases.

Particles of matter, organic, for a special purpose. That purpose fulfilled they shortly become contaminated and are then cast off through the medium of the circulation as unfit material for sustaining life.

The arterial blood becomes enormously freighted with poisonous and deleterious gases which increase in quantity as the blood

passes from the heart through the arteries and capillaries into the veins back to the heart. Thence to the lungs where it undergoes a change of arterialization and renovation by an exchange of gases known as the process of Respiration.

It commences in the tissues and capillaries by giving off oxygen and taking up Carbonic acid coloring the blood dark; on its arrival into the veins it is changed to a deep purple

and in some parts of the body it is nearly black.

The anatomical arrangement of the respiratory apparatus differs in different species of animals. In the fish we have the gills or branchiæ. In the insect we have no lungs but in their stead air tubes. The position or location of the respiratory apparatus differs in the fish. we find it on the external part of the body consisting of delicate filamentous

prolongations of some part of the integument or mucous membrane. are numerously supplied with blood vessels. and hang out freely into the surrounding water.

In terrestrial and air breathing animals however the respiratory apparatus is situated internally In which the air is made to penetrate the interior part of the body into certain cavities or sacs called the lungs. which are lined by a vascular mucous membrane

, but it matters not whether the re-
spiratory organs be simple or com-
plicated. The principle of res-
piration is the same. Its essen-
tial conditions being: that the
circulating fluid be exposed
to the influence of atmospheric
air, or an aerated fluid that
is, one holding atmospheric air
or oxygen in solution.

Organs Concerned in Respira-
tion. And first we have the
Larynx communicating with the

pharynx at the upper part of the neck. It performs three functions. viz. respiration, formation of voice, and assists in deglutition

It is narrow and cylindrical below, but broad above where it presents the form of a triangular box, being flattened behind and at the sides, while in front it is bounded by a prominent ridge. In composition it is cartilaginous, and is formed of nine cartilages - three simple

and three pairs: thyroid, cricoid and epiglottis, two arytenoid, two cornicula laryngis and two cuneiform, all connected together by ligaments, moved by numerous muscles, is lined by mucous membrane, and supplied with vessels and nerves. The epiglottis plays the part of a valve, the larynx opens in inspiration and closes in expiration, its movement being active in the former and passive in the latter function.

Next we have the trachea a membranous tube with cartilaginous rings. four and a half (4½) in. in length and three fourths (3/4) to one (1) in. in diameter.

It branches off or divides into two primitive bronchi. the right and left. — the right being shorter. thicker and more horizontal than the left bronchus. These again divide successively into secondary and tertiary bronchi. The ult

divisions continuing — while the bronchi grow smaller and more numerous and separate constantly from each other. As they diminish in size, the tubes grow more delicate in structure, and the cartilaginous rings disappear from their walls. Each ultimate bronchial tube terminates in a division or islet of a pulmonary lobule. A pulmonary lobule is about one twelfth of an inch in diameter. Consisting of a vas

Alar membrane enclosing a cavity which is divided into a large number of cells or vesicles by thin septa or partitions which project from its internal surface.

Respiration consists of two actions. The inspiratory act and the expiratory act each accompanied by sounds different in degree and intensity.

The inspiratory sound is shorter than the inspiratory act. but the expiratory sound is

longer and higher in pitch than the inspiratory. and we have the highest pitch when we have the greatest force. By applying the ear or using the stethoscope over the respiratory organs while a person is speaking we have the voice sound in the larynx which we call laryngophony. and in the trachea which we call Tracheaophony.

The air cells are separated from the blood by a membrane

$\frac{1}{2500}$ of an inch in diameter.

Lieber says there are 1500 sq. ft. of air vesicles. In respiration or during the exchange of gases as above mentioned there are alternate movements of the chest. of expansion and collapse.

This is affected by the diaphragm. intercostals assisted by the pectoral scaleni and abdominal muscles. The diaphragm descends and acts as a suction in inspiration and

in expiration it ascends. The lungs acting as a suction to it.

We have three types in respiration. — the abdominal. the inferior costal. and superior costal. In males we have the abdominal and inf. costal type and in females we have the superior costal type commencing at puberty.

Frequency of respiratory acts. In the adult they number from 11 to 24 — average 20. or 1 to 4

pulsations of the heart. Soon after birth they number from 40 to 44 — are more frequent in women than men and during sleep are diminished 20 per ct. Every ninth respiratory act is a long one. In auscultation we have first, the vesicular murmur of the lungs — a soft and breezy sound caused by the air passing through the vesicles.

In the trachea we have the tubular sound, high in pitch &

vesicular murmur being low, and at the right side or near the sterno-clavicular articulation we have the broncho-vesicular murmur. On the left side we have greater intensity of sound, but higher pitch on the right.

The capacity of the lungs, kinds, and amount of air re.

From investigations it has been ascertained that the air used in the lungs for respiration will admit of four divi

sions: first or residual air, that which remains in the lungs and cannot be got rid of, which is about 100 cubic inches: second reserved air or that which is in the lungs and can be expelled by forcible expiration, which amounts to 100 cubic inches, third "tidal" air is that volume which is alternately inspired & expired averaging about 20 cubic inches: fourth or complimental is the amount inhaled

by forcible inspiration, above the tidal volume amounting to 110 cubic inches. A man five feet eight inches breathes in health 230 cubic inches and for every inch above that height he will increase 8 Cubic inches. From one fiftieth to one-seventieth part of the air inspired is lost in the lungs. The capacity of the lungs in man increases up to thirty years of age that age it diminishes.

Composition of air. It is

composed by weight of 23 parts oxygen and 77 nitrogen, or 21 parts oxygen and 79 nitrogen by volume. It also contains one twentieth (5 per ct.) of carbonic acid and some traces of ammonia.

Air may live in an atmosphere where the reduction of oxygen is from 3 to 5 per ct. During respiration there is 5 per ct. of oxygen lost or given off in the lungs, and about one cubic inch of oxygen is absorbed by the blood at each inspiration. The entire quantity of

air used daily in respiration is about 351 cubic feet. involving the consumption of 172 cub. ft. of oxygen in the 24 hours. The average quantity of water exhaled daily by the lungs is 1½ lbs. 8 per ct. of carbonic acid is given off at each expiration and the exhalations of carbonic acid are formed by a low temperature.

It is thus seen that air when taken into the lungs and exhaled has lost oxygen, gained carbonic acid, and has absorbed water

The changes in the blood during respiration are inversely to those which we have found taking place in the air. The venous blood coming to the lungs holds carbonic acid in solution. In passing through the lungs its color is changed from venous to arterial, oxygen is absorbed and carbonic acid with water is exhaled; this interchange of gases is a simple phenomenon of absorption and exhalation.

The inspired oxygen does not immediately combine with the carbon in the lungs and exhaled as carbonic acid, but the carbonic acid exists ready formed in the venous blood, before its entrance into the lungs, and the oxygen which is absorbed in the lungs during respiration passes off in a free state with the arterial blood, which has become arterialized by the passage of the venous blood through the pulmonary

capillaries, and is exposed to the influence of the air in the cavity of the pulmonary cells. — a transudation of gases take place through the moist animal membranes of the lungs. the plasma of the blood receives the oxygen and thence is transmitted to the red globules.

The constant activity and nutrition of the tissues depending on their being steadily supplied with oxygen by the blood: but of the

supply be cut off, their functional activity ceases. The Carbonic acid will increase in the body, and terminate life in a short time.

The effects of breathing impure air in a confined space is very deleterious and soon becomes apparent. The Black Hole of Calcutta gives us a striking illustration of the fearful effects produced by breathing over oxygenated air, but alas! in mankind we need not go to Calcutta

to see its effects. How many are there who confine themselves to put up holes breathing not that which nature has given them but who are thus slowly and surely committing suicide. but to the subject. It has been ascertained that the interchange of gases is not complete in the blood. the arterial blood contains from 5 to 6 per ct. of Carbonic acid during digestion, and oxygen

is also formed in the venous blood. The formation of carbonic acid takes place in the lungs, blood and in the tissues. In the lungs there exists a peculiar acid substance soluble called "pneumic" or pulmonic acid, which is found everywhere in the pulmonary tissues whenever blood is brought in contact with it. Carbonic acid is formed. The greatest source of carbonic acid is in the tissues as

it is an established fact that in every organized tissue and even in every organ when in a recent Condition it has the power of absorbing oxygen & exhaling carbonic acid; as it has been shown that tissue outside of the body deprived of blood continues to respire. It is in its tissue substance that oxygen becomes fixed and assimilated and when the carbonic acid takes it origin and it is not a direct product of oxidation. But originates by a

decomposition of the organic ingredients of the tissues. The lungs are not the only organs that carry on respiration: we have the skin taking an active part, and exhaling as much Carbonic acid as the lungs. The amount of this acid is greater in a person with a strong Constitution and muscular system will developed than in one of opposite qualities: and thus we see how wonderfully Nature suits herself to the wants of her frail Creatures.

By respiration the life of the animal and vegetable kingdoms is sustained. one supports the other: the former exhaling carbonic acid, which the latter takes it up and gives off oxygen which in turn is inhaled by the former. A beautiful system of compensation in Nature for the perpetuation of life.

Certainly the main spring of existence is Respiration.

AN

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ON

[illegible]

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By

[illegible]

Of

[illegible]

Session of [illegible]

inspired with a spirit of
zeal and adventure, and prof-
iting by the golden examples
have brought to light and
made brilliantly obvious, facts
which have not only startled
the world on account of its
incapacity to realize and ap-
preciate the truth of them, and
unwillingness to believe that
man could attain such an
eminence of performance than
on account of their importance

instrumentalities in the alleviation of suffering humanity, afflicted with the pangs of disease.

Formerly the Physician was no more than a juggler, who with all the rights and appliances with which a superstitious age could clothe him, did a little more than to hasten his patient's end, and a little less than to [illegible]

[illegible]

[illegible]

a divine art, having burst through the nebulous mist of dark age it shines preeminently bright, and dispenses its brilliancy and blessings to the extremest limits of the globe.

The Surgeon now repudiates the language of his [illegible] says, "Dont my patient and God cures him;

Almost every process is clearly defined, whether Pathological [illegible]

Physiological. — We ask our 6
selves to what all this is due.

To the rapid advancement made within the last half century in both departments, to which we wish to call particular attention, on the theme of our feeble discourse.

It should indeed be encouraging to all to observe this fact and no who has adopted the profession as his calling can fail to feel a degree of pride

affords, valuable material for page and volumes. We only pro-pose giving a brief review of those most important in their nature.

First of these let us con-sider the Microscope, which has given new vision and accession to the most impor-tant field in the whole scope of Science and possessed us of that knowledge, of which we are directed we should in a great

[illegible] of the igno-
ance of our predecessors.

By means of this [illegible]
[illegible] aid, we are enab-
led to examine with mathe-
matical accuracy ultimate
elements of bodies: elements of
which heretofore have been hid-
den, and obstructed from our
view by the mysteries of nature;
and of whose existence we had
no knowledge.

"Each [illegible]

each Compact of our Tumor-
ous whole. Where bodies nature
is and God the cond^n. Where
Pathologious action necessari-
ly involves the Pathologious
nature of the body it went to
form, is now clearly before
us. We know their essential
nature, and knowing this fact
are capacitated to apply such
measures as will not only
prevent a morbid change
but which will promote a

medication, which is rendered
among the importance of
modern discoveries. Here we
are qualified when our pa-
tient suffers the most exqui-
sit agonies of pain — that would
perhaps soon render his life [illegible]
to palliate his misery, and
their insure life. Other advan-
tage it has also among which
may be cited the fact of our
being able to administer drugs
in the manner when they [illegible]

colic, and administer a dose of

"Magendie's Solution"

Though it is almost as speedy in its effective action, as the touch of the magician's wand, we understand the phenomenon perfectly.

A knowledge of Physiology and Physiological Anatomy explains the whole process: and little is there which transpires in the walls of human economy that does not find

a key in one or the other of these branches. Drugs given in this way are found to act like a charm, and their effects to be as permanent as they are speedily imparted. So important has this subject been considered, that a committee has been appointed in London to further investigation.

Much more could we say of this blessed discovery,

but as it meets the attention of those, more capable of doing it justice, than a student whose experience is limited we leave it, and revert to another point.

Again we have "Richardson's Apparatus" (Spray) for local anaesthesia, which has only been presented to the profession within the last few years, and which is considered by many of our

to refer our humble conver-
tion, in its favor, and a be-
lief that it will prove its
self worthy of patronage, in
certain cases, and under cer-
tain circumstances.

In reviewing the "Modern
Improvements," we cannot
proceed further, without ren-
dering some allusion to the
ingenious addition bestow-
ed upon the art of surgery by
the present, and distinguished

AN

Inaugural Dissertation

ON

Intermittent Fever

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OF

PHYSIC,

OF THE

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FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

James Knox Polk Sweeting

Of

Baltimore, Maryland

Session of 1867 & 1868

Intermittent Fever.

An intermittent fever is one in which there occur paroxysms of fever at regular intervals, between which paroxysms there is a total absence of all febrile symptoms.

This disease is known by quite a variety of names, popularly; "fever and ague", "the shakes", "chills and fever", "swamp fever", &c.

Generally, authors have treated of this disease under two heads, simple and pernicious intermittent fever. I shall therefore speak first of the simple, and then of the distinctive features of the pernicious, form of intermittent fever.

Anatomical Characters. — There are no known constant pathological lesions found on post mortem examination. The spleen has frequently been found enlarged and hardened; sometimes notably softened, even to such an extent as to present the appearance of dark coagulated blood. The liver has also been often found congested. The other lesions are generally due to complications, rather than to any influence of the disease.

Clinical History. — The attack is commonly a paroxysmal disease. Firstly, there is a chill, then fever, then perspiration; these then

phenomena constituting what is known as the paroxysm. After this follows the intermission, being that period of the affection which lasts from the termination of the sweating stage to the commencement of the next paroxysm, and differing from the interval in the fact that, the latter extends from the beginning of a paroxysm to the end of the intermission or the beginning of the next paroxysm.

The cold stage.— Usually the first intimation the patient has of the existence of the disease is the occurrence of a distinct chill not preceded by

any prodromic symptoms. But in other cases, he has the usual concomitant symptoms of fever, viz: pain in the back, cephalalgia, loss of appetite, nausea, yawning, and general malaise. The chilly sensations begin usually in the back or limbs, and thence extend over the whole body. During this period the patient is violently shaken in spite of all his efforts to the contrary; his teeth chatter; his surface becomes pale and shrunken, frequently, however, presenting numerous small elevations, due to an enlargement of the sebaceous and hair follicles, called goose flesh;

his lips and ends of his fingers assume a purplish hue; the appetite totally disappears, and although the tongue is generally moist, thirst is often present; gastric irritation sometimes exists, and there may be vomiting; the pulse is feeble and usually accelerated, though sometimes slow; mental irritability is a frequent symptom; the urine is frequently increased in quantity, though generally deficient in organic constituents. The duration of this stage is very variable, lasting sometimes from two to four hours; in other cases ceasing after a few minutes. Indeed this stage is not unfre-

quently wanting, the hot stage ushering in the attack.

Hot stage. – Succeeding the symptoms just described the febrile movement occurs, although the transition is not abrupt. From the sensations of coldness there are flushes of heat alternating with the chilly feelings. Soon, however, the skin becomes hot, the face flushed, and the pulse full and bounding. The anorexia continues, and thirst, if it have not been already present, usually now occurs. The length of this stage is from two to eight hours.

Sweating stage. – Following the febrile excitement perspiration appears;

all the unpleasant symptoms of the pyrexial period cease; and the patient obtains a quiet and refreshing sleep, from which he awakes, free from the unpleasant symptoms with which he had been previously troubled; his urine, which had been scanty and high-colored during the second stage, is now passed in large quantities, and if allowed to stand for several hours, usually deposits a thick reddish sediment known as the brick dust sediment. In young children, particularly, the cold stage is sometimes wanting or very slight. Blueness about the nails, coldness of

the nose, ears, hands, and feet, are the only appreciable symptoms. When this stage is entirely wanting, the term dumb ague is applied to it, to distinguish it from its more common form, the shaking ague.

During the intermission, a feeling of languor and debility generally exists, though the patient may be entirely free from all unpleasant symptoms. The appetite usually returns, and may be even greater than normally. The variable duration of this stage has given rise to a classification into types: quotidian, tertian, quartan &c. A quotidian fever is one in which an interval oc-

curs every day. In the tertian, the interval extends from the first to the third day. In a quartan it extends from the first to the fourth day. There may be a double quotidian, two paroxysms occurring during the same day; a double tertian, paroxysms occurring every day, but at different periods, those on alternate days being at the same hour; double quartans, paroxysms occurring on two days, and omitting the third. There are other varieties, but of very rare occurrence.

When speaking of the anatomical characters, it was stated that the spleen was often enlarged and indurated; this

is sometimes so well marked as to be distinctly felt through the walls of the abdomen. This manifestation is commonly known as the ague cake. The liver is sometimes affected in the same manner. Anemia is sometimes present, and is most likely to exist when the disease has been of long duration. Anasarca may be present as an accompaniment or sequel. Albumen has been found in the urine. It may be doubted however that cardiac or renal disease is in any manner to be regarded as the effect of the disease per se. The disease may be of variable duration. It may

and after a few paroxysms, spontaneously, or it may continue for weeks, months, or even years, unless cut short by judicious treatment. Another unpleasant circumstance connected with the affection is, unlike the continued fevers, a liability to relapses. It has been stated that the occurrence of this disease has a beneficial influence on other diseases, but clinical experience seems to disprove this statement. Indeed, Prof. Flint, in speaking of its supposed prophylactic influence against tuberculosis, remarks that "there is reason to believe that it favors the development of the affection just named

in those predisposed to it."

Causation.-- The cause of this affection may be traced very generally to a miasmatic influence denominated malaria. Though there are grave reasons for doubting that all cases originate from such influence. The introduction of a catheter into the urethra, the ingestion of irritating food into the stomach, or the presence of worms in the intestines, has sometimes been the only appreciable cause. There is a form which has been called the chill of habit. It is of rare occurrence, but nevertheless it sometimes is met with. A very interesting case is related by Prof. Wood. "Mr. Bracket for sei-

in successive nights, at midnight, bathed in the river Saone, towards the close of October, when the water was cold. Retiring to bed after each bath, and covering himself warmly, he was affected with considerable reaction, which terminated in perspiration. At the end of the seventh day, he omitted the practice, but was nevertheless nightly, about the same hour, attacked with a regular intermittent paroxysm, consisting of the cold, hot, and sweating stages, which returned for about a week, when it ceased spontaneously on the occurrence of an event which kept him out of bed at the hour, and induced him to take a ride on horseback.

which cooled and warmed him."

While the marsh miasm is undoubtedly the usual cause, all persons in different circumstances are not equally affected by its influence. Overexertion; exposure to cold, or any influences which tend to weaken the existing powers of the organism will act as an exciting cause. A remarkable circumstance connected with the disease is that, the poison in some cases seems to lie dormant for months or, it has been stated, for years after its introduction into the system, and then the influence of some exciting cause sets the apparently latent poison into activity, and the usual phenomena of an in-

termittent paroxysms are suddenly manifested.

Diagnosis.— In a well marked case the diagnosis is easily made out. But in some cases, the symptoms not being so well marked, there is apt to be considerable difficulty. Hectic fever sometimes simulates an intermittent. The paroxysm in the former is more likely to occur at night, while in the latter it occurs more frequently in the forenoon. The known existence of the tubercular disease on the one hand, and the known exposure to some cause sufficient to produce an intermittent fever on the other hand, are to be taken into the account in determining the

nature of the affection. The paroxysms may continue for such a length of time as to render it difficult to distinguish it from remittent fever. The error in diagnosis will, fortunately, not affect the treatment.

Prognosis. — Intermittent, uncomplicated with any other disease is rarely fatal unless of a malignant type. Simple intermittent may become pernicious, and in that case a fatal termination may be reached in a few days or even in a few hours. It may also be connected with other affections, and in that case its termination will depend upon the character of

the intercurrent disease. It is to be noticed that, enlargements of the spleen and liver, dropsy, jaundice &c, which result sometimes from this affection, are more easily controlled than the same affections resulting from different causes. When the period of the intermissions becomes longer, a cessation of this disease may be expected.

Treatment. – Cinchona and its preparations have a remarkable controlling agency in the cure of this disease. If any medicinal substances can be properly called specifics this remedy may be truthfully said to oc-

cupy the first position among them.
Nevertheless, there are some cases occasionally met with in which this remedy does not seem to have the desired controlling influence. The sulphate of quinine is the form also employed usually, and is thought to possess all the antiperiodic virtues of the bark in a greater degree, perhaps, than any other form in which it is administered. Cinchonigenine itself is sometimes used. Somewhat recently the sulphate of cinchonia has been experimented with, somewhat extensively, and it seems to have evinced antiperiodic virtues

fully equal to those of quinia.

Dr. A. Paul Turner, of the Physicians to the Howard Hospital for Invalids, in 1864 published a history of one hundred cases in which he had tried the remedy for the purpose of testing its value as compared with the sulphate of quinia. In nearly nine of these cases the progress of the disease was arrested. The writer, in speaking of the result of his experiments, says, "In slightly increased doses cinchonia is equal as an antiperiodic to quinia; so much so, that in [illegible] cases of [illegible]

used." The remedy, whatever preparation is used, should be given without delay, unless special indication be present. If the cow is be constipated, a mild laxative may be given. If [illegible], an emetic may be had recourse to; and indeed, an emetic, given a short time, prior to the [illegible], frequently [illegible]. Such a discussion has [illegible] to the proper time and manner of administering the [illegible] remedy; some of which [illegible] more likely to be most effective when administered in [illegible]

intervals, so as to occupy the greater part of the intermission; others, that the amount to be given should be administered all at once immediately after the paroxysm; but perhaps the best mode is to give it in moderate doses, say, in grains of Sulphate of Quinia or a proportionate amount of any other preparation every three hours until a sufficient quantity is taken, which will be determined by the occurrence of cinchonism, tinnitus aurium announcing its supervention. Upon this symptom having been established, small doses of the remedy should be given at intervals of several days for a month or more,

in order to insure the permanence of the cure.

This plan of treatment will generally be found sufficient to arrest the paroxysms, but if the preparations of the Peruvian bark prove insufficient, recourse may be had to various other remedies. Among these, the arsenite of potassa holds a high rank. Fowler's solution is the form generally employed, and, given in eight or ten drops doses thrice daily, may be considered as next in value to the preparations of bark. It is generally advisable to give this remedy for not more than a week at a time, as it might [illegible]

poisonous effects if administered for a longer period. Whenever therefore any puffiness of the under eyelids, or irritability of stomach is produced, this medicine should be suspended for a time at least. Salacin appears useful in a number of cases. The sulphate of bebeerine has been used, it is said with marked success in quite a number of cases. Common salt has effected a number of cures. Nitric acid has arrested the disease in a certain proportion of cases. Nearly all the vegetable tonics have, in one case or the other, exerted a beneficial influence, but all of them are inferior to the prepar-

ations of bark. These remedies are principally indicated in the intermission. During the paroxysm the treatment is somewhat different. A dose of morphia, given at the ushering in of the paroxysm, is often found beneficial in lessening its violence and shortening its duration. Cupping or the application of sinapisms to the spine has been known to have cut short a paroxysm. Sometimes when the chill is unusually prolonged and violent, a warm bath may be used advantageously. Warm drinks may also be given with propriety during this stage. When the patient seems greatly prostrated,

it is advisable to give stimulants. Ammonia and oil of turpentine are among the best. During the hot stage cooling drinks should be given. If the surface be very hot, tepid water may be used, externally to calm the febrile excitement. Irritability of the stomach should be treated with a mild emetic, if there be any natural effort to vomit. If it still continue, a sinapism to the epigastric region may be applied. Effervescing draughts may be also given with propriety. During the third stage, care should be taken that the patient be not exposed to cold.

The preparations of bark, taken in small doses, daily, when exposed to the malarious poison, have proved very efficient as prophylactics.

Pernicious Intermittent Fever.

In this form of the disease all the symptoms are very much intensified, and a fatal result may occur within a few days or even hours. It is of rather unfrequent occurrence, and in many regions is almost unknown. In most cases the first paroxysm or paroxysms are of a mild character; but in another class of cases the violence of the attack is manifested from the [illegible]. Some anomaly may [illegible] the attack.

The regularity of the different stages is often broken into. Different cases may be characterized by coma, delirium, or convulsions; marked reduction of temperature may attend other cases. The pulse is small, feeble and irregular. The heat is often intense and frequently attended with an internal burning heat. Oil heat nausea and vomiting are of very frequent occurrence. The breathing in many cases is exceedingly labored. When a patient has emerged from a paroxysm, danger is to be apprehended, in the event of another, in proportion to the degree of severity of the preceding paroxysm. As soon as there is reason to ap-

found that the disease is of a pernicious tendency, active treatment should be immediately instituted. If the patient be first seen during the paroxysm, the treatment should be directed, to the safe conduction of the patient through the paroxysm, and also to prevent the recurrence of another. If the circulation be greatly enfeebled, stimulants should be given freely. If, on the other hand, the force and frequency of the heart's action be greatly augmented, together with active congestion, it may be advisable to practice venesection. If the re-

face be cold, warm blankets, bottles of warm water, &c, should be applied. Opiates may be given when great [illegible] or convulsions are present; also when irritabity of the stomach and bowels are prominent symptoms. One of the preparations of bark should also be given during this stage. It should be given in larger quantity in this than in the simple form, for the reason that it seems to be better [illegible], and also on account of the importance of putting an end to the paroxysm. Diaphoresis should be [illegible] and maintained during the intermission, but not

in an excessive degree. After the termination of the paroxysms, the same course should be pursued as in the simple variety.

AN

Inaugural Dissertation

ON

TYPHOID FEVER,

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OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

D. Myers Eckenrode.

Of

GETTYSBURG, PA.

Session of 1867-8.

Typhoid Fever

I propose in this essay to treat of typhoid fever as it prevailed in the southern section of Pennsylvania in the practice of Dr. J. C. Kinzer, his brother the late Dr. S. G. Kinzer of Littlestown Pa. and within my own observation, merely alluding to other sections as historical facts.

That it is a subject which has been ably, and I might almost add fully discussed; one need only refer to the standard works on Prac

lice of medicine of the present day. Indeed! so much has been said, that to the student, it seems almost impossible that more could be added.

Yet the [illegible] of medicine [illegible], assisted by the microscope, [illegible] by practical anatomy and physiology is [illegible] developing new facts [illegible] and [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible]

adopted the name which [illegible]
this essay, because in the lan-
guage of Professor McSherry of
this University "it is good enough for me" and is eminently
distinctive of the disease under
consideration.

True [illegible]
present typhoid symptoms, [illegible]
may assume a typhoid [illegible]
[illegible]
are not so eminently [illegible]
the disease we are [illegible]
ering. [illegible]
eral weakness, and [illegible]
of pulse in most cases [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

case that occurred in the pra-
tice of Dr. Kinzer the patient
a little girl ten years of age
was covered all over with large
purpuraceous spots.

The nervous symptoms [illegible]

[illegible]

[illegible] now [illegible]

[illegible] headache with which [illegible]

[illegible] has been before [illegible].

[illegible]

way, and [illegible] either excess-
ively, and fluctuating, or slow
and scarcely perceptible; the
extremities become cool and
clammy, or the whole surface
is bathed in a clammy sweat;
the abdomen is [illegible]
[illegible]d; hiccough sometimes oc-
curs; the countenance assumes
the hippocratic aspect; and
life is quietly and almost in-
sensibly extinguished, though
sometimes when death takes
place at an earlier period, it
is preceded by [illegible] the [illegible]
ful struggles and convulsions.

When a [illegible]
is about to take place, the
tongue becomes moist, and
begins to clean gradually from
the lip, and [illegible] the pulse
becomes less frequent and [illegible]
quires greater fulness; the
skin relaxes becoming cooler
and less dry; the [illegible]
delirium subsides; the [illegible]
pays more [illegible] to objects
around him; the [illegible]
distention subsides, and some
inclination for food is man-
ifested. con[illegible]

being attacked at the [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] I have [illegible]
of children; and in persons
over 40 years of age. It al-
most never [illegible]
once in the same individual.
It may occur [illegible]
of the year, [illegible]
[illegible] in autumn [illegible]
[illegible]

state.

... is most likely to be confound
ed in this section are bilious re

mittent and typhus, the former however, may usually be distinguished by its more regular and decided remissions, by the bilious vomiting and yellowness of skin which frequently accompany it, by its [illegible] duration, and by the absence or comparative rarity of the characteristic symptoms of typhoid fever, such as diarrhoea, dingy complexion, dullness of expression, stupor, tympanites, and rose colored spots. And typhous symptoms are much less common in bilious than in typhoid fever. The latter, by constipation of the bowels

by the difference in the [illegible] of
eruption which in typhus fever
is sometimes quite dark; by its
not disappearing under pressure,
and showing no [illegible] for
any particular portion of the body.
It is eminently contagious, [illegible]
nates from over-crowding, and
ill ventilation, and is [illegible]
epidemical. Yet the practitioner
should be very guarded in pro
nouncing his diagnosis [illegible]
[illegible]
[illegible]
four days, to [illegible]
[illegible]

and very successful pla

the brain; I have always found that, a blister to nape of neck, [illegible] and small doses of [illegible] very kindly. If it settles in the bowels blister the abdomen, and administer Quinine Ol-terebith, [illegible] gum [illegible] in aqua. If the disease settles in the lungs; counter irritation Hg c. c. pulv opii et ipecac with some of the stimulating expectorants.

When I find [illegible] patients fail in strength I put them on port or sherry wine or brandy; in small doses frequently repeat

ed in order that the stimulating effects may not wear off before the stimulant is repeated. This is but a general plan and must in every case be so changed as to suit the case under treatment. The acid treatment now highly recommended by members of this faculty has been very successful in University Hospital, But after [illegible] are formidable in the treatment of a disease which presents such a multitudinous variety of symptoms and is so varied in form. He is the best practitioner who carefully

and closely watches the symptoms and treats them as they arise. The diet should in all cases be as generous as the condition of the patient will permit; strong light, and easy of digestion. The hygienic condition of the [illegible] should always receive strict attention.

[illegible]
[illegible] paper I have [illegible],
as concise a manner as possible.
to point out the [illegible] symp-
toms of [illegible] fever - its diag-
nosis - and prognosis - and
have also given a general [illegible]
of treatment.
In conclusion, it gives me [illegible]
[illegible]
aided, in arriving at the views
above presented, by a [illegible]
study of Bennett's [illegible].
Wood's practice, and Watson's
lectures by the [illegible]
instructions, and teachings of

Dr. Wm. H. Baltzell of [illegible]
and J. O. Kinzer of Pa.
and by the valuable lectures,
and instructions received from
the eminent members of the fa-
culty of the University of Mary-
land.
I trust that the eminent mem-
bers who compose this faculty,
may long live to [illegible]
the University of Maryland,
and may this institution con-
tinue to prosper in the future, as
it has done in the past; to
educate and send forth to the
field of duty, many gentle

men learned in the scien-
of medicine, who will a-
the profession of this city
by administering in a scientific
manner to the wants of the afflic-
ted; and by a constant aim
to skill further advance this
the most useful and important
of all sciences.

AN

Inaugural Dissertation

ON

Pneumonia

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

L. Lyon Thomas

Of

Frederick Md

Session of 1867-68

Gentlemen of the Medical
faculty of the University of
Maryland

In complying with
the rules of the time honored
institution over which I
preside I have with much
diffidence & perhaps no little
rashness undertaken upon the
subject of Pneumonia Cer-
tainly not for the purpose
of throwing any new light

upon that which reflects the thoughts & observations of such intellects as Watson Wood Flint & others. But simply to convey my own crude deductions trusting if they reflect no honor upon their author they will bring no discredit upon your teachings.

The discourse itself as the name signifies is inflammation of the substance of the lungs. The pathology is [illegible]

and variable & for convenience
of description I propose to divide
it into three different forms.
viz - Ethmoics Asthmatics & Syphilis
of these I first propose to write
then conclude its pathology by
referring to its symptomatology
etiology &c - as they may pre-
sent themselves before me -
The classification of this dis-
ease in its different forms
is based on the peculiar

nature & characteristics of each attack - The Sthenic form of this disease is recognised as the word itself implies by high inflammatory action full action pulse - plethora, a strong constitution &c - The second or asthenic denotes corrupthem in accordance with marked debility - The third is so named from its strong resemblance in many respects to typhoid fever - This likeness being

based in symptoms partaking
very much of the nature of
that disease & when so existing
is known as Typho-Pneumonia.
The nature & tint & termination
of this disease originates from
changes in the pulmonary
substance itself & they are
imparted as principally by
auscultation & percussion.
which the [illegible]
us to appreciate changes

effected by inflammation in the lungs of the lung tissue. which it is very essential we should know for without a perfect knowledge of the morbid anatomy of Pneumonia. We cannot have a groundwork to study its pathology. There are three well marked conditions in this disease. The first known as the stage of engorgement due to active congestion of the lung

tissue in this condition it
crepitates less under pressure
than natural & air cells
are filled more or less with
exudations of Lymph [illegible]
contributing much to form
the minute crepitation which
is unmistakable evidence
of engorgement. which may
imperfectly or completely
obliterate the natural or
vesicular [illegible]

which if it does is conclusive that the inflammation is still progressing. Whereas on the other hand should crepitation be replaced by that of natural respiration. We can conclude that resolution is going on. At the commencement of the stage of engorgement the minute crepitation or crackling of Pneumonia as it is sometimes called is [illegible]

intimately mixed with normal
respiration - But as inflammation
advances the healthy sound
is drowned by the crepitation
which grows more & more
distinct to be finally the only
one coming from diseased
lobe or lobes - defining clearly
that it is growing more
severe & serious - This con-
dition exists during the trans-
ition of Pneumonia from

first to second stage or period
of solidification. When owing
to solidity caused by exudation
of Lymph. The air is excluded
rendering respiration impossi-
ble in diseased lobe or lobes
& thereby excluding the minute
crepitation of the first stage -
which is diagnostic of the
second being fully established
When so Percussion is attended
with a dull flat sound &

Auscultation confirms our belief that the second is developed by Bronchial respiration & Bronchial voice. Two new & important sounds which may however be present or absent. The first of these is influenced by the seat & extent of the disease. The second by descent of Patient's voice into a pervious Bronchi. Often in conjunction with these wi

fixed Pleurite respiration -
This period is one of great interest
& to me it seems we possess no
means of ascertaining whether it will
revert slowly back to its original
state or advance into that of
purulent infiltration - If the
former there will be a mis-
tion of the morbid [illegible]
which characterised the adhesion
into a nursed order - until
absorption is completed

should it tend to the third
stage a fatal result may be
anticipated if Patient be feeble
& not able to bear it long
enough that reparation may
take place. Pneumonia is usu-
ally announced by a chill-in-
creased heat of skin rapid pulse
generally pain in the side below
& near the nipple. Conclusion
almost of Pleura Pneumonia.
Cough Sense of Oppression

in the chest - Dyspnoea - Expectoration & Fever are general indications of Pneumonia - The Pleuritic pain is peculiar to the invasion & diminishes as the disease advances It is aggravated by Cough Percussion, sudden change of position &c - The Dyspnoea is sometimes severe at others slight is increased by laying on healthy side - These though they are valuable, are not to be relied upon.

owing to the variable structure
of the breathing apparatus in
different persons. It is some-
times known so soon that
the Patient cannot lie down - the
face grows livid, red or pale -
nostrils are dilated & respiration
so difficult as almost to
convince us air did not
enter the Bronchi - Delirium
denotes a very gravel condition
of things - shows that the
arterialization of the blood

has not taken place & that
the inflammation is letting
through the circulation of bonus
blood upon the brain - Respecting
its most usual seat - I would
say stastico show it to invade
the lower lobe of either lung
more frequently than any
other portion & that of right
side oftener than left - The
higher up the inflammation
the more unfavorable the Prognosis

~~The~~

The etiology of this disease is
I may say very imperfect. Cases
often occuring attributable to
no apparent cause. Still there
are many capable of develop-
ing it. Cold, exposure to night
air, damp weather, traumatic
injuries &c are all causes
If brought on by the last named
cause it seldom extends
over a whole lobe. The
diagnosis is sometimes

difficult owing to the form
of the disease & numerous
complications. In such
instances Auscultation and
Percussion cannot be too
highly appreciated. The Prognosis
if uncomplicated is generally
favorable. Much depends
upon previous health-habits
& constitution of the individual
how rapid the infiltrate
tendency of the disease
is to recovery.

Hoping Gentlemen I have
dilated sufficiently upon my
subject. though I know justice
has not been done it. I will
conclude with some general remarks
concerning its treatment. If called
at its invasion would direct an aperient
use anodynes to allay pain &
produce quiet - resort to Invasion
when necessity called for it.
should the pulse be so accel-
erated as to need an [illegible]

sedative would select the
veratum viride & avoid general
bloodletting expect in a strong
robust constitution at the
commencement - If Dyspnoea
was very great would not hesitate
to abstract blood locally - Blisters
are often indicated together with
stimulants when vital powers
are failing - Good diet & Careful
Hygienic regulations are the most
important that present themselves to me -
Respectfully Yours
Chas. Bigelow Thomas

AN

Inaugural Dissertation

ON

Fractures

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

James Innes

of

Pennsylvania

Session of 1864 & 1865

Fractures [illegible]

Fractures Surgically speaking are solutions of continuity of animal tissues.
This separation may take place in any of the component parts of animal organization.
The most frequent causes are from external influences. The parts nearest the joints are most liable to fracture for the reason that the longer muscles being attached nearest to the joints and to

the extremities of the long bones. A general exception to this rule may exist from the fact of the bones being friable from constitutional causes.

Fractures of the soft parts may be divided into those of muscles, arteries, veins, nerves, and skin. In the denser tissues they may be divided into those of bones and fibrous tissues.

The most serious results following fracture of the denser tissues

Blood is a complex
fluid which has been
called by a physiologist

The appliances to accomplish
the union of fractures, with the
least discomfort to the
patient have engaged the
attention of many Surgeons
[illegible]
apparatus [illegible]
[illegible]
much necessary [illegible]
this deformity, [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
the recuperative [illegible]
of [illegible]

extending cord [illegible]
an angle of 15 deg.
[illegible] the
weight of the body [illegible]
cient to bring into apposition
the fractured [illegible]
bone,

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible] Compression [illegible]
the [illegible]
[illegible]
being [illegible] by the
weight of the [illegible]

cations and is equally
[illegible]. The [illegible]
[illegible] [illegible] [illegible]
[illegible] [illegible] [illegible]
and pasteboard being
adjusted after being
moistened.
A [illegible] of [illegible] starch
covers this and a
roller is applied over
that which is [illegible]
saturated with the
starch.
The process of
drying is also one of
contraction and the
fractured [illegible] [illegible]

[illegible] in an immoveable casement, which can at the proper time be removed by the simplest means of [illegible] surgical dressings

It supercedes the old means produced by plaster of Paris while the purpose is accomplished

[illegible]

the partner part of the body [illegible] be treated [illegible]

[illegible]

of Coaptation [illegible] be
done

AN

Inaugural Dissertation

ON

Cod Liver oil

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

[illegible] Alston.

Of

Warrenton, North Carolina

Session of 1878

Cod Liver Oil

After much thought and consideration I have determined to place before you a Thesis on Cod Liver Oil, although I feel a great delicacy even in attempting such a thing — after such eminent and distinguished predecessors. Nevertheless I feel compelled to add another to the already filled Thesis Books. Cod Liver Oil is obtained from the liver of the "Gadus

Morrhua" found in great abundance on the coast of Newfoundland. There are other kinds from which the oil is procured but I will content myself with mentioning one other only, the "Asellus Striatus" or the Dorse found mostly on the Norwegian coast. I shall only give a description of the Common as I have neither time nor space to describe any of the rest.

The common Cod is about three feet long, with brownish or yellow spots on his back and covered with small scales with the exception of his head which has none. The fins are soft. The jaws are furnish with irregular teeth in several rows. The gills are large with seven rays. Preparation of the Oil. There are three methods of obtaining the Cod liver Oil 1st, by

boiling the liver with water and then filtering. 2nd by making tall vats which are furnished with taps to draw the Oil off. You then put the livers into the vats and expose them to the sun to favor the separation of the Oil. 3d method by exposing the liver to a temperature of 180° until all the Oil has drained from it.

Description & Varieties. There are three kinds of Oil known in this market. The White or Pale Yellow the Brownish Yellow and the Dark Brown. The Pale variety is considered the best. It is the only kind ordered in the Pharmacopoeia. It has a specific gravity of 0.917. The Oil has a feeble acid reaction and is soluble in Ether in all proportions.

Officinal Characters. Pale Yellow

with a fishy Taste and Odor

Composition - Fresh Cod Liver Oil

consist principally of Olein,

being about 80 per cent, 15 per

cent of Margarine, and a

peculiar substance called Gadein

very analogous to one of the bile

acids, besides these it contains

Cholic Acetic and Butyric acids

and at times indications of Iodine &

Bromine although Authors differ about this latter

substance. Test for Cod Liver Oil.

Sulphuric acid has been used as a test, on the addition of a drop of the acid the solution assumes a violet color and then passes into a brownish red. This coloration is thought to depend on the action of Sulphuric acid on some one or more organic constituent of the oil. It is also thought to be due to the presence in the Oil of one of the

constituents of the bile.
Cholic acid produces the
same color with sugar and
sulphuric acid as bile, so
that the test doubtless acts
on this acid. It follows
from what has just been
stated that sulphuric acid
is the test for liver oils,
as it distinguishes them from
all other kinds of oil, but
does not distinguish one liver

oil from another. Neither does it distinguish bad from pure oil. Purity:- The Oil as contained in the cells of the livers when fresh is nearly colorless. It is obvious therefor from what has been said concerning the different varieties of oil that the colorless oil contains made from the fresh livers of the fish must possess the constituents

of the oil in its present state.
Darker Varieties. These are obtained
either at a higher temperature
or from the livers in which
putrefaction has made more
or less progress. This variety
contains more biliary and
decomposed material than
the rest. Cod Liver Oil
is said to differ from other
oils in not yielding Glycerine
on saponification.

Physiological Effects. Cod Liver Oil when first given causes nausea, disagreeable eructations, and occasionally vomiting. It acts as a diaphoretic, laxative, and diuretic, in doses of a Tablespoonfull; although some Authors deny its diuretic and diaphoretic powers. It has also been known to act as an Emmenagogue in some instances. The superior therapeutic

powers of Cod Liver Oil is thought by some to be due to some peculiar constitution of its oleine. It is certainly known that no oil can begin to compare with it in the diseases in which it is used. Dr. Williams thinks it is more nutrient and more capable of being absorbed than any of the other kinds of fats. And it is the opinion of other

"Athons that when given to
phthisical patients that their
blood grows richer in the
red corpuscles. Therapeutics. It
was employed to a considerable
extent and for a long time in Northern
Europe before it was any
where else. It was first brought
to the notice of the profession
at large by the German practitioners
and acquired great distinction on the Continent
before it was ever in Great Britain

But it was not employed in the United States until the attention of the American profession was called to it by Professor Bennett of Edinburgh in the year 1841. At the present day it is esteemed as one of the most important remedies in the catalogue of Materia Medica. It has been employed in a long list of diseases, but I will mention only the important

ones such as Scrofula, Phthisis, Rheumatism, Gout, and indeed in all cases of emaciation and deficient nutrition. It has also been found useful in various cutaneous eruptions such as ulcers of the mouth, Lupus, &c. It may be given for constipation, incontinence of urine, and various other diseases. In the disease in which it has been found most efficacious and in which it has gained the great

reputation, is that of Pulmonary Phthisis; but its use will have to be persevered in for sometime before any benefit can be derived from its employment. As to its "Modus Operandi" there is a difference of opinion. Some thinking it merely a nutritive agent and having the advantage over other oleaginous substances in being more readily taken in the system and in being more easily assimilated

While others believe it is due
to a peculiar constitution of its
oleine. To conclude with its
Therapeutic uses, it may be given
in all chronic cases with hope
of success. Administration. The dose
of Cod Liver Oil for an adult is a
Tablespoonfull three times a day and for
a child a teaspoonfull. It may be given
alone or with some of the emulsions.
But the best vehicle in my estimation
is the froth of Porter

AN

Inaugural Dissertation

ON

Intermittent F...

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

John H. Bayne

Of

Prince George County, Maryland

Session of _____ 1868

Introduction

The profession of Medicine at the present day commands the universal admiration & astonishment of the enlightened world. Second in importance only to that noble profession, which has for its object the salvation of the soul. What can be more self sacrificing & noble than the errand of the true physician? Exposed to the inclemencies of the weather, & often to the capricious individuals, he must battle manfully ere he reach the goal. But while so many difficulties are

accompanied, yet the [illegible] physician & urbane gentleman rarely fails to ingratiate himself into the confidence & respect of his fellow-creatures.

The practice of Medicine is not like other professions with its hours of ease & certainty. Liable to be summoned at the mid hour of night to the bed of suffering & pain, with the anxious eyes of each bystander, reading the expression of his countenance, it remains for him to show by his decision of character & knowledge of his profession that he is worthy of the confidence bestowed upon him

The case may be an urgent one, needing prompt & immediate relief, no time for vascillation & doubt remains, but a single stroke of effective treatment, may redound with such credit & eclat, that the reputation & talent of the practitioner will be at once established. But if on the other hand, the physician approach the case with doubt & uncertainty, well may the patient ponder & consider him unacquainted with his science. The power of the physician in cases of sickness is powerful for good or evil, his slightest motion & action is watched,

his smallest command obeyed with that scrupulous accuracy, wh: caused Sir Walter Scott to say, "the sick chamber of the patient is the kingdom of the physician". The study of medicine is not now wrapt in so many mysteries, as in the olden era's. The steady progress of science & investigation, has swept away many ingeniously contrived & subtle theories, gotten up to palliate the ignorance of the age. He who invaded the sanctity of the grave was regarded as a monster, meriting condign punishment.

Autopsy was regarded with a [illegible] [illegible] [illegible] never permitted. But now with the steady advance of civilization the world is beginning to look upon post mortem dissections as not only justifiable, but necessary to a proper understanding of the anatomical relations & the internal lesions caused by disease; It is by these examinations alone that such wonderful advances have been made in pathology & morbid anatomy, thus rooting up the fallacies that have held sway in the medical profession for years.

But the question now naturally arises. Do these investigations into the pathology of disease & the rapid advances I made in other branches of Medical science, benefit mankind & prolong the existence of human life? In answer to this question we have only to point with pride to the mortuary & statistical reports when it will be conclusively shown that not only is longevity increased, but lives are oftener snatched from the jaws of death. But while the strength of the science is often able to relieve the suffering & abate symptoms,

it is not unfrequently the melancholy [illegible] of the physician to stand at the bedside of the patient & see that the only prospect [illegible] of death renders inert the resources of medicine. Inured to suffering & disease in all its various phases it is natural to presume that the feelings & sensibilities of the physician would become blunted to ordinary feelings of humanity. Yet I am not aware that such is the case, for as a class I think the profession bears a favorable contrast with any other collection of individuals. Of course the

surgeon is not expected to enter into all the pain & pangs that the keen edge of his scalpel may give rise to, if such was the case, poorly competent would he be to perform with accuracy & precision the difficult operations committed to his charge.

Every medical man should bear in mind the honor & interests of his profession, & by his labor & research leave behind him a name that will live in future ages, as associated with some important discovery in the science of his adoption.

Intermittent Fever.

Intermittent fever comes on in successive paroxysms. This form of disease is attended with a decided intermission. Sometimes an attack makes it appearance without any previous warning, but not infrequently do we find it to precede the attack with certain well marked phenomena viz. - The patient will complain for a day or two previous to the regular setting in of the disease of a feeling of general lassitude, indisposition to engage in any species of employment

dizziness, languor, cephalalgia, loss of appetite, muscular pains situated in the back & loins – constant disposition to yawn & a feeling of Malaise. The above is a synopsis of the principal premonitory symptoms.

The paroxysm is divided into 3 stages, Cold, Hot & sweating stage.

In the first a sensation of coldness & chilliness passes over the body generally commencing in the lumbar region. Suddenly the extremities become thoroughly chilled & drawn up, muscular

contractions take place. Face becomes pale, - lips of a livid color countenance anxious & depressed, patient often now heaves a deep sigh. Pulse weak and insignificant. Patient manifests a great desire for more cover & hot bricks to his feet. The thermometer applied under the axilla exhibits an actual increase in temperature. The hot stage sometimes begins without a previous cold stage. The duration of the cold stage varies much, sometimes lasting only a few minutes, or for two hours.

hot stage. Sometimes this stage commences directly, but more gradually as a general thing. A slight flush is is seen upon the cheek, the patient no longer feels the desire for covering evinced during the chill — the muscular contractions cease, coldness passes off & the fever takes its place. Pulse before small & weak, now becomes quick & full, headache still remains, pains felt through limbs disappear. Surface of the body feels hot, thirst very great.

Thermometer indicates temperature

of from 100 to 105 ft. This stage generally lasts 3 or 4 hours. Next the sweating stage sets in. Perspiration appears upon the surface usually beginning on the face. It is now that the febrile symptoms abate, Headache & thrust no longer annoy the patient, the tossing to & fro ceases. The patient now sinks into a delightful repose, awaking comparatively well, though quite debilitated. The urine if examined will be found to have an excess of urea, uric acid & often albumen. Having completed

the paroxysm the intermission takes place, wh lasts from the end of one paroxysm to the beginning of the next, counter-distinguished by its from the interval, by its duration being from the beginning of one paroxysm to the beginning of the next. This disease exhibits 3 special varieties, denominated respectively Quotidian, Tertian & Quartan. In the Quotidian the paroxysm comes on every 24 hours. In Tertian every 48 hrs. Quartan every 72 hours.

As regards the comparative frequency of the three varieties we find the Quotidian to occur most frequently — Tertian next & Quartan very seldom. The paroxysms occur generally in the forenoon, seldom coming on at night. It is apt to choose some particular hour of the day, appearing within a few minutes of it. If the attack comes on at a later period one day than the preceding the disease is subsiding, if on the other hand it occurs earlier it is an evidence of the increased severity. Dumb Ague is a form

when the paroxysm is obscurely defined.
tongue coated [illegible] white, desire
for food greatly diminished, and
when close attention is paid, the attacks
are noticed to be regular. Intermittent fever
is found associated with other diseases,
Pneumonia, Dysentery & Neuralgia &c.
in this state it is said to be masked.
Neuralgia occurs often periodically, when
it will generally yield to the treatment
of Intermittent fever. The length of an
attack of intermittent fever varies
greatly, it may terminate spontaneously

Or go on for months, thus prostrating the system, and producing a [illegible] state of Anaemia. Not infrequently do we find it lurking insidiously in the system, making its appearance again in the spring. One attack predisposes to another. Anatomical Characters. There is nothing pathognomonic of this disease. The Spleen is generally enlarged & softened & the internal organs are congested. The peculiar complexion of persons residing in Malarious districts, is often a subject of remark of the intelligent, a [illegible] [illegible] [illegible].

Intermittent fever is thought by some
exert a prophylactic influence against
Phthisis pulmonalis, but such is [illegible]
being true, as we might readily suppose
by its tendency to break down the system,
that it would rather favor the advance-
ment of that disease, if there be any hereditary
leaning. Prognosis, In the uncom-
plicated form we may give a favor-
able prognosis, if there is any danger it
is generally when it takes on a pernicious
form. Diagnosis. This [illegible] the [illegible]
intermittent [illegible] [illegible], [illegible]

[illegible] attention to the [illegible] the pre-
[illegible] & intermission, [illegible]
a correct opinion. There may be [illegible]
difficulty with regard to a form known as [illegible]
ded ague, this may often be discovered by
the action of Quinine upon the system.
Causation. Heat & moisture seems to be
necessary to its development. Vegetable [illegible]
is thought to be a prolific cause. The dis-
ease is most apt to appear in low & moist lo-
calities. Persons on the first floor will be
affected while those in the second story
not infrequently escape the poisonous [illegible]

rise. The poison seems to be of a dense specific gravity, travelling along in close proximity to the earth. Puffs of wind will frequently convey it to previously uninfected regions. Some climates are so replete with the poison that it amounts to certain death to pass a single night exposed to its influence. Many instances are reported of travellers who slept over night in some poisonous locality such as many portions of Africa, to wake no more.

The quantity of poison is largely increased at night. Large excavations of earth [illegible]

the poison in a great measure, & we often remark that those who reside just on the banks of a river will be exempt while, while those living but a short distance back will suffer repeatedly.

Recent investigations of Prof. Salisbury seem to establish the fact that Intermittent Fever is due to a peculiar Cryptogamic growth, which is found in the Malarious districts. Dr. Salisbury draws his conclusions from the following observations. He found "that the zoöspores

examination of the salivary secretions & mucous expectoration in the morning of persons residing in a malarious region shows cells of an algoid type resembling strongly those of the palmellae, to be the only constant bodies present, & these bodies were invariably absent when examined in the secretions of persons residing above the summit plane of ague". As a country becomes drained & cleared off we find this type of fever disappearing. Clumps of trees also exert a great protective influence, pers. A remarkable instance of this has come under my

immediate notice, my father's residence facing.

The Marsh bordering the Potomac river twenty years ago, was constantly subject to the influence of the morbific poison. Since then numerous evergreens & deciduous trees have grown up, completely enclosing the exposed side of the house, furnishing a barrier wh. seems to act as a filter or sieve - sifting the air, absorbing the poison & giving complete protection. Malaria is generally brought to a sudden termination by a temperature below 60° F.

Treatment. It is here that the Science of Medicine can point with triumph to its grand specific, wh. controls with the utmost certainty this disease. If there is a specific for any disease, they all yield precedence to Quinia. The discovery of the peculiar property of Cinchona Marks one of the brightest pages in the Book of Medical literature. Recent investigations seem to establish its physiological action to be its supply of a peculiar waste in the system (Quinia), wh. theory Prof. S.C. Chew adopted in his course of

lectures. While Cinchona exercises this remarkable influence as a curative agent, it also possesses great prophylactic powers, so that individuals residing in marshy neighborhood may entirely escape its effects by taking Quinine in the due proportions. This however is not the sole agent in the treatment, though cases continually yield to its administration alone. We first use remedies for the relief of the paroxysm — then for the cure of the disease. If the bowels are constipated give a mild cathartic Calomel & Jalap five grains of each

The Specific promoter [illegible]. Quinine should be administered immediately after the paroxysm or as long before the next as possible. This however is subject to exceptions as in the case pernicious intermittent fever, when we administer the antiperiodic regardless of the paroxysm. For an adult 20 grains will generally be found sufficient to check the disease given in broken doses of 5 grains every 4 hrs. Certain cases call for the administration of larger amounts. He can generally judge when a sufficient

quantity has [illegible] taken by [illegible]
making its appearance. Various forms &
modes of administering [illegible] are
vogue; it is most effective however [illegible]
given in solution, — its solvency being
easily effected by the addition of one or
two drops of Aromatic Sulphuric acid
to the ℥i. This is an objectionable mode though
owing to the intense bitterness of the substance
hence it is more commonly given [illegible]
pillular form. If there be much gastric
irritability it may be administered per
enema, or by the more popular Hypo[illegible]

mic method [illegible] strong arguments in its favor — viz. it acts more speedily, and it is said that 1/3rd the usual amt. is sufficient. But while this mode of administration has these two strong arguments in its favor, it also has its objections. 1st it is obnoxious to the patient 2nd sometimes troublesome abscesses are formed. It is more used in this way in Remittent & Pernicious fever than in Intermittent. Palliative measures are often highly highly beneficial, a full dose of Opium given in the beginning often being attended with

happy effects. Sulphuric Ether also very good.
Coma [illegible], [illegible] the feet in hot water
& Mustard affords relief. In the hot stage
cold sponging is very grateful to the
patients feelings, cool beverages, such
as lemonade & ice water, crushed ice
during the fever very fine. Next to the
preparations of Cinchona, Fowler's Solu
tion of Arsenic ——— will act best.
Dose Gtt VI or VIII, 3 or 4 times daily.
Dr. Wm H. Hammond has reported a
number of cases in wh. he found Nitric
acid in doses of Gtt X. 3 times daily to

[illegible] the [illegible], Citrate or Iron & Qui-
nine is a useful mixture to follow the
sulphate. The disease shows a tendency
to reappear about the 14th day, this
can be counteracted by the administra-
tion of a large dose of Quinine a day
or two before the expected return. The
Spleen may be sensibly diminished in
size, by the application of an oint.
of the biniodide of Mercury. Iron is also
used in this disease, yet as an anti-
periodic in this disease they all
yield the palm to the Cinchona Bark

AN

Inaugural Dissertation

ON

The Circulation

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Samuel G. Thompson

of

Maryland

Session of 1867 & 1868. 18

The Adult Circulation.

The blood is that element which nourishes the tissues, and imparts harmony and strength to all the functions. It has been termed the River of Life.

It may not be amiss to take a brief review of its History.

To the Ancients, the Circulation was concealed by three grave errors: First that the arteries contained only air — Secondly that the septum between the two ventricles of the heart —

was perforated. Third that the vins carried blood to the extremities instead of bringing it from them.

With whom did these errs originate — Who discovered them, and substituted in their place truth. Erasistratus maintained that the arteries contained air rather than blood — he believed it penetrated the lungs by the trachea — whence it passed into the venous artery which is now known as the pulmonary vein then to left ventricle —

3. thence to the arteries and was con-
veyed by them throughout the sys-
tem. What was then recognized as
the arterial or aerian, and the venus
or sanguineus system — is now term-
ed the sanguineous or circulating system

It belonged to Galen to show that
the arteries contained not air but
blood: if, argues he the arteries con-
tain air, when one of them is pun-
ced, air should come out, and not
blood — which he satisfied himself
by demonstration was not the case.

but vice-versa. He further demon- 4.
strated the fact by placing two li-
atures upon an artery, and making
an opening between them, when
blood and not air met his
investigation. But the followers
of Erasistratus attacking him with
the inquiry, that if arteries con-
tained blood, how could air
pass into all parts of the body—
he answered, it does not go there
but is rejected. It serves the pur-
pose of respiration by its temperature

5. and not its substance, it cools the blood, that being the object of respiration. In that opinion Galen was far from the truth – ~~respiration~~ tion does not cool the blood but heats it. Yet Galen had discerned a great truth – as air does serve the purpose of respiration – He had defeated the doctrine of Erasistratus that air passed into the arteries in substance – distended them and caused the arterial pulsation – he had cleared up one error

and substituted in its place the important fact, that the arteries contained blood, thus illustrating the principle, that everything in a science cannot be discovered at once, that the greatest perfection is arrived at by time, careful study and investigation the accumulation and wisdom of ages. We owe it to his genius that a true foundation was laid, on which could be built upon, that in the future years

7. was to be so happily completed, without which, the true circulation might have much longer moved gently in its course, unknown to man, a source of difficulty to him — a perplexity which might long have resisted his most eager investigations, a stumbling block to his genius.

Galen also discovered in some way, that there are two kinds of blood the arterial & spiritual, and this means the arterial nourishing more delicate organs, such as the lungs.

and supposing it to be generated in the left ventricle, and the venous supplying organs, and pertaining to the right side of the heart and the veins — Thus Galen opened the way to greater discoveries.

Vesalius who has been termed the Father of modern anatomy believed that no septum between the ventricles existed, and the second vein was dissipated.

Servetus with no less ingenuity perceived this truth and built

upon it— he too affirmed that no septum existed between the ventricles that the blood passed through the arterial vein into the lungs, and returned by the venous artery.

The words et à venâ arteriosâ in arteriam venosam transfunditur are significant— indicating a new and brilliant era to mankind— In this way did he state the pulmonary circulation, and foreshadow the cause of it: Whence the large calibre of the pulmonary artery, argued he, and

the great quantity of blood conveyed to the lung, if its nutrition alone is regarded, and especially, why does such phenomena exist, when in the foetus no blood is conveyed to the lung in that manner — He believed the air had some influence upon the blood in the lung. The oxygenation of the blood, while passing through the lungs was predicted by this great man —

Realdo Columbus six years after asserted the same fact.

11. Caesalpinus ascended the same Ladder of fame – he mentioned the passage of blood through the lungs. and actually called it- the circulation: Caesalpinus did much more by discovering, that the vein carried blood to the heart, instead of from it. He also conceived the general circulation. Then had the three great veins been exposed and illustrated.

Fabricius is crowned with two laurels: viz. the discovery of the valves of

the veins, and being the teacher of Har- 12.
-vey. These valves are an anatomical
proof of the circulation of the Blood.
We will next notice Harvey
When he entered upon the field of
Science — in which he was destined
to be crowned with immortal fame
whose name was to be handed to
posterity, and cherished with a sa-
cred remembrance, for the great bless-
ing he conferred upon mankind —
nearly every thing pertaining to the si
had been suspected or indicated.

13

yet nothing satisfactory had been established; so true is this, so prominently does it appear as a fact, that Fabricius, who, came after the salpinus, the discoverer of the valves of the veins, was in darkness regarding the circulation. Caesalpinus, who, perceived the true circulation, maintained the use of a perforated septum. Servetus seemed to know nothing of the general circulation. Columbus held to the doctrine, that the veins originated in the liver and

transmitted blood to the extremities. 14

Clouds and darkness had not yet disappeared, and given place to sunshine and light. To Harvey was it left to perceive the whole truth to digest it, and to present facts and doctrines, bearing true relations to each other — having the appearance of order and harmony — whereas before they were but disorder and confusion — to present the circulation of the blood, which he did in the year 1616. — Modern Physiology

'8. begins from the discovery of the circu-
lation - The Moderns made their
entrance into science from the date
of this important event - an event
which shook the authority of the
Ancients to its foundation & inflicted
upon it a blow from the
effects of which it never
after this brilliant, and fruit-
ful discovery, the Moderns dared
to walk alone - Men no longer sworn
by Galen, they swore by Harvey"

Having taken a brief review of the 16.
History of the circulation, we will
now proceed to describe the organs and
vessels, by which it is effected —
First comes the heart — the great
centre of circulation — That organ which
receives the blood — sends it to the
lungs, again receives it, and propels
it throughout the system.
The heart lies upon the cordiform ten-
don of the diapraghm, between the
pleurae in the cavity of the thorax
Anatomically it is situated between

17. the lungs — Physiologically the lungs are between the heart. It is a hollow muscular organ, enveloped by the pericardium. It is conical in shape yet somewhat flattened on the side resting upon the diaphragm. Its apex is on the left side, between the fifth and sixth ribs. Its dimensions are five inches and a half from its apex to its base — diameter of base three inches and a half. Its weight is about seven ounces. It is characterized by four cavities — The auricles

which receive blood, and the ventricles which propel it — The right auricle is larger than the left — belonging to it is an appendix auriculae and five openings — namely; the superior cava — inferior cava — coronary vein — Foramen Thebesii — Annulo ventriculari — two valves — the Eustachian and coronary — two remnants of foetal structure Annulus ovalis, and fossa ovalis — and two characteristics in the structure of the auricle — 1st. Tuberculum Loweri, and Musculi pectinati.

19. The superior vena cava conducts the ~~conducts~~ blood from the upper part of the body, opening into the upper and back part of the auricle —

the inferior vena cava or the ordinary brings blood from the lower half of the body emptying into the auricle through the lower and posterior wall near the septum auriculorum — The coronary returns blood from the substance of the heart opening into the auricle, between the inferior cava and auricle contained

opening under shelter of the coronary valve — The auricle ventricular opening communicates between the auricle and ventricle — The coronary valve stretches across the mouth of the coronary vein, preventing reflux of blood into the vein during the auricular contraction. The muscular fasciculi are small muscular columns situated in the appendix auriculae — they are many in number and arranged parallel with each other. The right ventricle

contains two openings, namely, the auric-
uli ventricular — opening of Pulmonary
artery — two valvular apparatus — tricus
pid and semilunar, the Chordae ten
dinae and Carneae columnae —

The left or posterior auricle is small
er, yet thicker than the right — it
has for examination five openings
three, four pulmonary veins, two
from the right and two from
the left lung, emptying into cor-
responding sides of the auricle —
sometimes they terminate by a common

2. opening — auriculo ventricular, commu
nicating between auricle et ventricle
and the musculi pectinati, situated
as in right auricle — The left ventri
cle is conical in shape, forming the
apex of the heart — it has for exami-
nation two openings two valves, the
chordae tendinae, and muscular col-
umns, they are the auriculo ventric-
ular, and aortic, the mitral valves
which are attached around the
auriculo ventricular opening, as in
the tricuspid in right ventricle,

and semilunar valves, situated around 23.
the commencement of aorta, like those
on the right side, are placed around
the pulmonary artery. The chordae
tendinae attach the tricuspid & mitral
valves to the columnae carneae.

The arteries are branching tubes
beginning with the aorta, and distributing
blood throughout the body. They have
three coats viz: an internal homogeneous coat, a middle tunic composed
of elastic muscular fibres, an external tunic, constituted of layers of

condensed areolar tissue.

The combined area of branches ~~the~~ given off from a trunk is greater than that of the original vessel – consequently the combined area of the small arteries is much greater than that of the aorta from which the arterial system springs. Since then, the blood flows through larger spaces in its passage from the heart outward, the rapidity of its circulation must be diminished in proportion as it recedes from

the heart. The passage of blood through the arteries is caused by contractions of the heart, modified by the elasticity of the vessels.

The veins have also three coats possessing a smaller quantity of muscular and elastic fibres, but a larger proportion of areolar tissue. Their office is to convey blood to the heart. They are provided with valves to prevent its flowing back to the extremities.

The passage of blood through

26. the veins rests upon the united action of three different forces — first, inspiration, second contraction of the voluntary muscles, and third, the vis a tergo of the capillary circulation.

The capillaries are minute tubes, distributed among the tissues, imparting to them their nourishing properties, they have only one coat. The causes which impel the blood through the capillaries are, elasticity of arteries,

elasticity of the capillaries, and elasticity of tissues through which it passes. The affinity of the tissues for the blood is also supposed to exert a favorable influence upon its windings through the capillary circulations.

Having noticed the parts which convey the blood, we will proceed to state the adult circulation, which is as follows— The blood is collected in the veins and emptied in the right auricle

from the superior et inferior vena cava, thence it sets the right ventricle through the auriculo ventricular opening, then conveyed to the lungs by means of the pulmonary artery it becomes arterialized - reaching the left auricle through the pulmonary veins it flows inward through auriculo ventricular opening to left ventricle from which place it is forced into the aorta and distributed throughout the system, imparting beauty, strength et

AN

Inaugural Dissertation

ON

Progressive Medicine

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Frank Shipley

of

Baltimore County Maryland

Session of ..... *1867-68.*

Our age is progressive. The ways of our fathers are no longer trodden by feet content to follow where their sires have led. Successive ages, successive changes and successive revelations have opened to us new fields for speculation. Each generation has taken its data from the last and best exertions of the preceding. a work is begun by one mind, continued by a second, and completed by a third. Thus year after year, has change followed change, and improvement followed improvement, until the young man of the present day contemplates with awe the ignorance in which our ancestors were satisfied to remain. In ignorance, of things known to us, but to a home is the credit due of lifting the veil from our eyes. It is

scarcely been our fortunate fate to have
selected the truth from all former theories.
If such were the case, then could we perfect
at the present time, in all that had been
conceived by our predecessors. But unfortu-
nately how much that has been received
by one age as true, has been found by
future ages to be false. We may judge of
the merits of former sages, and with not
one tenth part of their force of mind and
genius, point out where they are wrong
and where they are right. Time, has
educated and cultivated our minds, and
the works of former authors, are the stor-
houses from which we may gain points
to theorize from or theories already worked
out for our benefit. Time has educated and

cultivated our minds, but they q boy of
genius and the force of intellect cannot
be gained by study, but must be a gift
to us from nature herself. Our literature
is full of elegance of gentleness and of
harmony, but can we boast of anything
to surpass the force of Horace the beauty
of Homer or the eloquence of Cicero?
Our battles are gained by the exertion
of invention, by the calculation of en-
gineers, and the scientific use of deadly
implements. But is there more fatal determi-
nation or more patriotic virtue, than was
displayed by savage gladiators in the
ancient arena, or the noble Spartans
at the pass of Thermopylae? Our profession
has been graced by the most brilliant minds

of all ages; but is there one that shines with a more brilliant light than the father of medicine Galen of old? Granting that genius is not confined to the nineteenth century alone - there are many other things combined with the good common sense and indefatigable industry of our present teachers, that justly gives them the name of teachers in a progressive age, and students in a progressive science.-

Medicine has made rapid strides in advancement. Some indeed have been too rapid, and have only to be retraced again by the patient worker. None have however been taken to our disadvantage. For if theories have been advanced, that have had to have been

recalled, they have only served to point out the dangerous pitfalls, into which the unwary are liable to stumble, and stand as landmarks to guide us along the straight plain forward path to truth. Medicine has advanced gradually, and in no one department has it advanced faster than in another Anatomy, appears as though it must have been clearly understood from the beginning. Since the scalpel of the dissector must have touched with unerring certainty the deepest recesses of the human body. But this was not the case, as we know that the circulation of the blood was not fully discovered until the seventeenth century, when Harvey the great English Anatomist made his name so conspicuous

among the bright luminaries of medical literature, by the publication of a discovery now so patent to every medical student. Even then, the subject was looked upon suspiciously and not till the middle of the seventeenth century, when that grand instrument the Microscope was brought into use, was it generally believed in. Thus has it been in every department of Anatomy. Even the dry bones have been made to deliver up their secrets and speak unknown and unthought of languages through their most eloquent oracle Prof Owen. As in Anatomy, so has it been in every other branch of Medical Science. Physiology until a few short years ago, was dead to all Medical students. but what branch can now

boast of more beautiful discoveries, more
pursuering researches, & more important
results! - Has it not laid a foundation
on which the entire edifice of rational
Medicine has been raised. - To whom
are we more indebted for all this,
than, to the men of our own day -
the men of this progressive age. Who
do we not know the use of every organ
of the human body - from the minute
hair follicle scattered so thickly and
diffusely over the entire body to the
very centre of life itself, that most
vitally important organ the Heart.
Have we not been shown the wonderful
beauty of the human economy & all
been taught to respect it in every part.

the least as well as the greatest! All this has physiological research discovered and its careful observers made it so and lucid for the benefit of the modern student. In its important researches into the truths of the human organism Physiology owes indelable thanks to another of its sister sciences Chemistry. No longer does the Alchemist sit poring over his crucibles, in his midnight researches after an ephemeral substance, but in the broad day light of Modern Science, takes his place as one of the true workers for the good of mankind. How different is the status of the two, the ancient Sorcerer and the modern Chemist. The brightest minds were formerly looked

upon with feelings akin to horror owing to the secret nature of their investigations and the baneful effects of their discoveries. He himself bowed down to the God of gain. Spent his life in seeking the elixir of life or the Philosophers Stone, a boon to be gained simply for his own benefit, and an instrument rather in the distruction than the salvation of the lives of his fellow men. The Chemist works not for everlasting life for himself, but in the fond hope of being able to discover the true elements of health, and to be able to hold forth his hand to succor the afflicted, and make the short span of life allotted to each as long and as

comfortable as may be - Is it not to
the Chemist that is due the discovery of
the elements of every secretion of the
body, and thereby giving to the Phy-
siologist the opportunity of applying
his skill to the maintenance of health
and the proper balancing of all the
workings of the human body! Does
not the Materia Medica owe all its
preparations to the skill of the Chemist
and by his work employ the active
principles of otherwise useless and
unpalatable drugs, in such a form
as to be not only not disgusting, but
even pleasant to the suffering and
debilitated patient - Even the powers
of the Surgeons knife are indeed

painless by his preparations, and the
maimed and crippled Soldier sleeps
quietly on the tented field, while
the sharp blade of cuts unconsciously
through his quivering flesh, and
his life blood ceases to flow and he
is saved.- As Surgery has employed
the results of Chemistry, so has each
branch benefited by the results of
the other until Medicine now stands
one [illegible] whole, giving life to
the dying health to the feeble, and
even when the End must come, letting
those whom the departed leave behind
know that no human skill could avert
the calamity, but that the voice of
his maker had called him away, and

man was powerless to save.

Thus stands our noble profession. A science not merely in name, but in fact. A profession ceases to be a dweller in our midst, and the bright sunshine of practical truth holds undisputed sway. A practical science itself, and one that gives the lead from all its sister sciences to make it more perfect and more practical. It may be said that the foundation of our science was laid in conjecture, and in darkness, but this is not so. What medicine was in former ages, is no criterion from which to judge of its present state. A science based upon conjecture is like a house whose foundation is laid upon sand, but the temple of modern medicine has

... foundation laid upon the adamantine rock of practical research. A temple not to be shaken down by the tempest, nor scathed by the hand of ruthless barbarians. Built in no spirit of arrogance or display of wealth, as was the temple of Solomon, nor famous like it to tell a nation when there was peace or when there was war. But a temple reared by the energy of a class whose sole object is peace, and whose humble contributions are laid upon this, the shrine of their ambition, by the weary pilgrims plodding their way into the mysteries of nature. It is no idea of perfectness that leads the medical man, to gaze with pride upon this huge edifice. For he cannot but be aware of

the incompleteness of it, in many respects nor of the time and labor that has been required to bring it to its present state. But he knows that patient labor has done this much, and why cannot patient labor do more. Can a life be spent with nobler aim than to try to aid our science in its progressive course! And what more speaking monument can he leave behind him, than to have his name written upon one single tablet in this great temple. Huge monuments have been built to the memories of great heroes. Kings have bowed to them, and nations have become their humble slaves. But with them ends their glory and the world must hear with pleasure that one whose highest ambition

was in taking the lives of his fellow men had ceased to live.-

In entering upon the study of Medicine, each student has this bright prize to work for, and it is his highest aim, to emulate the deeds of these great and good men that his name also may be enrolled in their proud galaxy. Fortune does not shower her favors upon the dreamer, nor fame entwine her laurels round the brow of fortunes favorite. True merit is more appreciated in this, than in any other profession. Two short years from the time a student first opens a medical book and he is dubbed an M. D. Armed with this license, he takes his place among the rest of the profession. Young in years, [illegible]

a character scarcely yet formed, and totally inexperienced, he has entrusted to his care the dearest ties that bind man to this world. Is it to be wondered at, that the confidence of Communities is so religiously withheld from him, and that the gray heirs of his fellow worker are alone [illegible] worthy! Sad would it be were it otherwise for during these years of probation must the young physician make good the time that ought to have been spent in obtaining his diploma. It is during these years that he must wean himself from the enticing snares of the world and bind his every faculty, to the task that he has imposed upon himself, that in the end his epitaph may be

"Illum aget penna metuente solvi
Fama superstes"

Frank Slingluff,

AN

Inaugural Dissertation

ON

The Physiology of Food.

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

John Leonidas Waring.

Of

Prince Georges County, Md.

Session of 1877-8

In order that the functions of the body should be properly performed, it is necessary that the system should be supplied with proper sustenance at stated intervals, and this, as is well known, constitutes an invariable law of nature. Therefore when we take food proper to the organism into our mouths, it stimulates the salivary glands while we are masticating it. This food having been properly masticated, and mixed with the saliva, is carried into the stomach and there excites a healthy action; stimulating

the secretion of the gastric juice
be then have chyme formed
which passes through the pyloric
orifice into the duodenum, and
excites all the adjacent organs
of digestion to healthy action.
The perfection of every thing re-
quires that certain conditions
be fulfilled, alike true in nations
as in individuals, but requiring
a closer observance in the proper
government of the human body;
and these laws will be shown
of under your heads in the order
in which they occur: Quantity—
Quality— Manner and Condition

of the system when taken. It is obvious that the quantity of food varies which is necessary for the system. More food, comparatively speaking, is taken during the periods of childhood and youth, because at this time, because at this time it is necessary for the growth of the different parts of the system; the digestive organs is now much more active, the appetite is keener, and all the functions are more energetic. When the age of maturity arrives food is only required for the organism which is rapidly

formed and consequently, less is taken. If now the same quantity of food be taken with fewer years, and indolent habits are indulged in, the digestive functions are powerless to provide for the proper dispersion of the fluids, and dyspepsia and its accompaniments follow: debility supervenes, and the whole system is impaired. In many instances the body becomes weakened from disease or starvation; then food can be given until the demands of nature are satisfied but in a careful and prudent man-

ner. It is a law in nature that the greater the activity, the greater the waste; and we find it true when we change a life of indolence or sedation, for one of labor and activity, that the excrementitious matters are thrown off from the body in larger quantity; the blood circulates more rapidly, and the red corpuscles which carries the food to the system deposits it more rapidly; and, as the chyle supplies the blood with substances necessary for nutrition and as the chyle is formed directly from the food we must eat that

food will be demanded in pro-
portion to the chyle taken up.
Unless the nervous system which
is our computer has been im-
paired, when the sensation of
hunger is experienced, its sug-
gestions should be properly at-
tended to, as it shows the system
is in want of nourishment. We
are not one of those who believe
that a person should get up
from the table hungry for if
hunger be as it most assuredly
is a demand of the system for
food, why should we not satisfy
that demand unless contraindicated

by some disease of the stomach? and even in those cases, we have means of supplying the system as by enema. On the other hand when we exchange a life of activity for one of inactivity the waste of the system is less and therefore does not require the same amount of food. It is frequently seen in colleges that students who have come from the country where their lives have been one of activity that consequent upon the sedentary life which they must necessarily lead, the system soon becomes impaired because the ner-

some energy which should be conveyed to the stomach, is more or less called or drawn off by the mental labor which their duties requires, and they may suffer more from impaired digestion than those who have always led a life of idleness and are now subjected to the same life because the change is greater in the one case than in the other. The heat of the body is greater, in reference to the greater change of tissue, and the rapidity with which it is removed; and if the body requires more food in winter, and the

time it does, does not that show that the waste must be greater at that time, and if the change be more active, is not more heat produced? Those who are ill fed, or who suffer from non-assimilation consequent upon indigestion, or any other cause require more clothing than those who are well fed and nourished, and whose functions of digestion and assimilation are perfect. If it be true that we require more food in winter because of more waste, and also for calorifacient purposes, then

it not follow that a less amount is required during the warm months, because of less waste, and because also the heat furnished by the sun. If our digestive organs are weakened, and unable to retain or prepare our food, then we should only take such quantities as can be disposed of, a small quantity until the organs have resumed their proper tone when it can be increased to meet the demands of healthy nutrition. There may be a sensation of hunger, which happens most frequently in flat-

tons whose stomachs have been inordinately distended by too much food, and upon failure to introduce the usual quantity, they have a sensation of hunger not from a healthy desire but from the diseased sensation of the stomach, and which is fallacious. Many of us have observed the stupidity or languidness of the snake, after swallowing a bird or toad; a precisely similar effect is produced upon the human system when we take an excess of food into our stomachs. The stomach is a very

vascular and nervous organ, and when an excess of food is taken, it demands and draws upon the system for a larger portion of blood and nerve force, than it receives in ordinary acts of digestion; and it is a law of our nature that when we have an afflux of vital force, or a concentration of action in any one portion of our system, we must have depression more or less felt at some other portion, consequently we have languor and debility when our stomachs are too full. In conclusion, we may

in reference to the quantity of food taken, assert that there is no absolute rule for governing all classes of persons. Hunger, though nearly always, is not an invariable rule, while its absence is not "proof positive" that food is not needed. A false sensation which may be mistaken as a demand of the system for food, may be, and indeed often is created by what are called by dram drinkers, "appetizers", or the various condiments in use. On the other hand, disorder of the nervous system may prevent a cognizance

of the sensations of the stomach when the body actually requires and demands nourishment.

The Quality of the food next demands our attention. The influence of food for "good or evil" is modified by various circumstances; habits, season, and mode of preparation all exert their influence. It should be perfectly obvious as based upon reason and facts, that those articles of food which have the greatest number of constituents which are also found in the human body, are

the most fit for food, because they supply a substance lost to the organism. And we find accordingly that milk and eggs, which come nearest in constituent elements to the human body, are really highly nutritious as articles of food, and are used throughout the world. Boiled food is more healthy than when prepared in any other manner, because the tissues are more properly broken down and disintegrated, and are more easily acted upon by the gastric juice. But food which is the

most easily digested, is not always the most fit for nutrition; it is a law of the stomach as well as the muscular system at large, that an increase of action brings an increase of growth of power, and food may be introduced into the stomach which only gently excites the secretion of the gastric juice, now if we have only this feeble stimulation and if the stomach is called upon to exert at all times only a moderate degree of action, it will soon lose its tone. We see this in convalescence from disease the

stomach has lost much of its power from disuse, although the patient may have been taking a modicum of food, and here we have to gradually introduce proper aliment to support the system. Human beings cannot thrive on any exclusive class of food, as animal or vegetable; though in warm climates we find almost an exclusive vegetable diet, because more cooling; and in the cold regions we find the inhabitants subsisting almost entirely on animals and oils, because more heating. While

in our own climate we partake of a mixed regimen, as the seasons dictate; a mixed diet is however for all persons, no matter where they reside, most conducive to health. It is said that nutritious food, should have an innutritious element to excite the stomach by its mechanical influence, and that substances which have not this innutritious element, although highly nutritious in themselves, will not excite properly the secreting glands of the stomach. Animal food has been found the highly

stimulating, and therefore indicated in the cold weather of our own climate, and in the summer months we have a desire for vegetable food which as I have before said is more cooling.

Age generally requires more animal food, and in changing our diet, we should do so gradually even from a bad to a good habit.

Manner of taking food.

As a starting point we will begin by saying we should take our food at regular intervals, which intervals are regulated by habit exercise, age &c of the individual.

Digestion goes on more rapidly in the young, vigorous, and industrious, than in the aged, debilitated and idle, and as waste is greater in the young and vigorous, their systems of course require more food, in order to supply, or build up the waste of tissue. Food is generally digested in from two to four hours, though it is sometimes more or less, according to the character of the food, and the vigor of the individual, and ordinarily a period of four or five hours should elapse before our stomachs are again called upon for its labor.

If food be taken before the stomach has recovered from its expansion in digesting, or reducing to chyme a previous meal, then we have secretion of the gastric juice imperfectly performed. Where there is great debility of the stomach it is vastly important to bear this in mind. Unless the process of masticating our food be properly performed, the stomach is called upon to perform a "double duty", that is, first separating the particles of food, and then acting upon them in their reduction to chyme. Here is one great error many display

in eating. Very many gulp down their food so fast that the stomach has not time to impart a knowledge of its repletion to the system, and consequently we have an overloaded stomach and this is a great source of the indigestion which so troubles the American people. Great draughts of water or other drinks are decidedly injurious during meals, not only does the food become moistened by the fluid itself, which should be done by the secretions of the salivary glands but these glands are two

by left without performing their
proper function, that of insalivation,
which I think must gradually
tend towards their atrophy
or disease; or if the saliva be
secreted, it is diluted by the
fluids taken and renders it
thus far an inert matter and
unfits it for the part it performs
in digestion. Fluids taken
at meals also dilute the gastric
juice, retarding digestion.
I believe that large draughts
of water, or other fluid during
meals comes of habit more
than from any full necessity

man is the only animal which leaves his food "to take a drink". Food which is moderately warm is more healthy than when very cold or hot; cold food taken in the stomach causes the walls of the stomach to part with its heat in order to bring the mass to the same temperature, and when unduly heated if it does not scald the parts, it excites them to a stimulant action which debilitates the organ as heat does our bodies. It is said that cows stall fed in cities on slops and refuse matter from kitchens

lose their teeth in about two or three years, and it is questionable whether such milk be fit food for infants, or even adults.

Condition of the System

The system should be in a state of equilibrium at the time of taking food. Each organ requires and demands a certain amount of vascular and nervous influence, if this be called off from the stomach, as it will be by any undue exertion the stomach is thereby rendered unfit for the "time being," for the reception of food.

From a half to three quarters of an hour should elapse between the cessation of active exertion and the taking of food. The stomach then will have received its proportion of blood and nerve force which had been called off during exercise of other parts of the system. Hurrying from the counting room to dinner and from dinner to the counting room is a fruitful cause of dyspepsia. After taking a good meal, it is natural for us to feel lethargic, this shows that a certain amount of nerve

and vascular force has been drawn from the system to the stomach; and if we now turn our attention to our daily avocations, whether they be mental or physical we draw away from the stomach again the agents necessary for the accomplishment of digestion; therefore some time should elapse after meals before resuming our employment. Subjects which require much mental effort should be avoided at the "social board" the brain refuses to impart its nervous energy, and the nerves

of digestion is consequently hindered. Distorted mental vision termed "night-mare", is brought on by retiring to our beds before the last meal has been digested, and as such is the case, several hours should pass before retiring to rest. During sleep the functions of digestion are lessened, if therefore we eat a hearty meal just before retiring there is less nerve power manifested over the stomach, which being the case the food would remain undigested, which would then through sympathy distress the

brain; the unchanged food remaining in the stomach, becomes as it were a foreign body, irritates the nerves supplying that organ, which sensations are communicated to the brain thereby causing those unpleasant interruptions to our slumbers. In persons recovering from disease, or who have had food long withheld, food should be introduced carefully and considerably, and as animal broths are both nutritious and easily absorbed, they are indicated while the stomach becomes strong

enough to bear a protracted digestion. The movements of the muscles of respiration are a decided stimulus to digestion, and anything which interferes with the movements of these muscles, such as tight-lacing is a fruitful cause of indigestion. Pure blood being absolutely necessary to healthful digestion anything which interferes with the oxygenation of the blood, such as ill-ventilated apartments, cannot fail to produce ill deleterious effects upon the stomach unfitting the digestive organs and

functions, and diminishing the
desire for food.

AN

Inaugural Dissertation

ON

The Pathology & Treatment of Cataract

Submitted to the Examination

OF THE

Provost, Regents and Faculty

OF

PHYSIC,

OF THE

UNIVERSITY OF MARYLAND,

FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

Louis McLane Tiffany

of

Maryland

Session of 1867 & 68

The term cataract strictly applied denotes a partial or complete opacity of the lens or its capsule or of both.

In a state of health they are perfectly transparent, after 30 years however in most persons, the lens assumes a pale yellow tinge, which

increases with advancing age until in old subjects it may be quite amber coloured.

It will not be inapt I think, to glance at the anatomy of the lens before considering the affection of which I speak.

The lens is biconvex, more so posteriorly than anteriorly. It is surrounded

by a strong fibrous
sheath, quite transparent
and of a perfectly
homogeneous consistence.
From the ciliary processes
passes off the "suspensary
ligament of the lens"
to this capsule, and
becomes incorporated
with its substance.
The central portion of
the lens is more hard
than its periphery

forming a nucleus. The fibres, generally speaking, are disposed in planes converging from without inwards, more or less curved according as they approach the anterior or posterior surfaces of the lens.

Looking at the anatomy therefore it is not very difficult to account for the various forms of cataract

thus, an opacity commencing at the centre would give rise to a white cataract with diverging radii; a good example of this kind of cataract is found in the congenital variety where the centre is opaque, while the periphery may be quite transparent.

Of late years the existence of so called

capsular cataract has been denied. Stellwag of Germany first pointed out the fact that having examined about 50 cases of this so called variety, in all instances, he found the opacity to result from a deposit on the inner surface of the capsule, between it and the lens, and not in the

substance of the
capsule itself.
Cataract may be of all
colours & consistencies,
varing from pure white,
grey, yellow, to absolute
blackness; these last are
extremely rare, being
usually intersected by
a few minute, grey
striae. The substance
may be so soft as to
fall asunder at the

first touch of the needle, while in other cases the cataract will be of almost stony hardness. A third class is fluid, surrounded by a thin envelope; this is termed the Morgagnian cataract.

To better consider the subject let it be divided into Congenital, Adult and Traumatic.

Congenital cataract.

The extent of opacity may here vary greatly. The most simple form is a small white dot on the centre of the lens [cataracta centralis]. beneath the capsule. As the patient is frequently ignorant of its existence interference would be injudicious.

Again; the cataract may

assume a conical form on the anterior surface constituting the cataracta pyramidata. The most common, form is that of opaque nucleus ~~and~~ with radiating lines; perhaps also the cortex may be quite transparent, or with fine white lines intersecting it.

More rare forms are those in which the lens is

faintly striated throughout or where the opacity becomes apparent from 7 to 10 years of age.

This variety of cataract is often accompanied by a twitching of the eyebrows & eyelids termed nystagmos.

Congenital cataract usually affects both eyes, although this peculiarity is not constant.

Adult Cataract

Exist as result of an injury, rarely between puberty and middle age does cataract result.

It usually commence at the periphery and advances towards the nucleus. Converging radii are first visible, these fail and degenerate, cholestrin in crystals may become visible, the substance may.

soften and become
morgagnian. This latter
variety may be distinguished
from from other forms
by the fact of the
fluid gravitating towards
the lower part of the
lens & thrusting the iris
forward.
The traumatic variety
results, as the name
implies, from an injury.
A penetrating wound

of the lens is almost certain to produce an opacity; a blow producing defective nutrition would cause a like effect.

Should the humours of the eye enter the lens it will produce its absorption & disappearance; this first probably, suggested the treatment by solution.

The diagnosis of traumatic cataract, as distinctive from

other varities would rest on the existance of adhesions resulting from iritis, the pupil would be filled up by a flattened disk, very opaque, white, more remote than true lens, patchy areas the whole margin may be adherent to the iris, black dots may appear on a white ground, in fact it may assume all colors and figures.

Now in regard to the treatment. This must be operative as to the present time, no solvent for an opague lens has been discovered.

As to the propriety of operating. The supervention of inflamation being very frequent, it is not judicious to interfere unless the other eye may become affected and sight fail.

as one eye will be sufficient for most purposes and the inflammation resulting from the treatment may cause the loss of the sound eye. Three modes of operating are open for consideration that by depression or reclination, that by extraction, that by solution.

12

The operation by depression or reclination.

This consists in entering a needle through the sclerotic & depressing the lens from the line of vision. It is thus performed. The patients head being well supported and the eyelids held open, the operator, seated before the patient, using the hand to the side of the eye

to be operated on, enters the needle through the sclerotic about two lines behind the margin of the cornea, directing the point of the needle towards the axis of the eye, as by it he controls its motions. The point of the needle is fixed infront of the lens, which is then forced backwards and downwards out of

the line of vision. The lens is held a moment in this position, when the needle is slowly withdrawn. I do not think that this operation is a good one, as sooner or later the lens sinks down by its own weight and resting on the retina sets up a destructive irritation resulting in amaurosis.

1

The operation by solution.

The steps of this operation are precisely similar to the previous one, with the exception that the needle is forced into the lens and breaks it up, giving entrance to the humours of the eye which cause the solution and absorption of the fragments; it is well to force some of the

fragments into the
anterior chamber of the
eye in this operation, as
there, absorption is
thereby accelerated.
The operation by extraction
This consists in making
a section of the globe
of the eye, introducing a
hook and removing the
lens through the incision.
Different surgions at
different times have advocated

various modes of performing this operation, some by section of the cornea some by that of the sclerotic; the one most generally in use at present is that of Grafe which consists in an incision through the sclerotic, introduction of curette, etc, etc, After the operation the patient should be kept in a dark room for a

five days until symptoms
of inflammation shall
have subsided. Should
such results follow the
operation however, they
are to be combatted
by the so called
antiphlogistics (eg) local
depletion, watery solution
of opium.
The patient after
recovery will have a
very good sight with

the employment of the
cataract glass.

Louis

AN

Inaugural Dissertation

ON

Pneumonia

Submitted to the Examination

OF THE

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PHYSIC,

OF THE

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FOR THE DEGREE OF

DOCTOR OF MEDICINE,

By

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of

North Carolina

Session of 1867-8

Pneumonia is an inflammation of the substance or parenchyma of the lung. The true seat of the disease is in the membrane lining the air cells and the bronchioles. Each case may be said to consist of three well defined and regular stages, corresponding to the intensity of the inflammation, and the time the lung has been affected. The 1st stage is called the stage of active congestion or engorgement; 2nd red hepatization, and the 3rd that of gray hepatization or purulent infiltration. During the first stage, there is an accumulation of blood in the substance of the lung, a state of active congestion hence hurried respiration. The lung whenever then normal, and it loses its elasticity and if an incision be made into it blood and bloody serum looking frothy and full of little bubbles will run

out of it. Its strength is lessened, and it is more easily broken down; it looks somewhat like the spleen. hence this stage of the inflammation is called splenization of the lung. During this stage very little aid can be gained by the sounds which we hear on percussing the chest: consequently we place our chief reliance upon the auscultatory signs in diagnosis. This stage does not last long. Exudation soon begins, in this as in all cases where a serous membrane is involved in inflammation [illegible] the air cells and minute bronchioles. This exudation drives out the air, and soon it coagulates [illegible] becomes pus. The lung becomes solidified, looking like the liver somewhat, hence the second stage is called red hepatization of the lung. In this condition the lung contains no air, and is more easily broken down due to the softening of the [illegible]

Diagnosis. In well marked cases it is not very difficult [illegible]

[illegible] accompanied by a chill & fever along with [illegible]

[illegible] below or near the nipple, and if the [illegible]

[illegible] is present the diagnosis can be [illegible]

[illegible]

[illegible]

[illegible] of pneumonia when [illegible]

[illegible]

[illegible]

[illegible] respiration as well as [illegible]

[illegible]

no bronchophony. [illegible]

[illegible]

[illegible] be confounded with bronchitis [illegible]

[illegible] the sputa is streaked with blood [illegible]

[illegible]

[illegible]

It is really wonderful to read how effective each plan of treatment, and each remedial agent act, when administered and employed by the originators are given according to his directions. A table accompanied with the pathology of pneumonia and a more correct knowledge of physiology have almost wrought a complete change in the treatment of this disease. Blood letting once considered indispensible is now rarely resorted to; nor is it indicated except in a plethoric and robust patient and where the circulation is greatly impeded. Nor then only in the first stage of the disease. In the first stage it may act as a remedial agent as well as a palliative. If the action of bleeding from the artery, the same ends may be obtained by Cups and Leeches over the Chest. Blood should be taken with great caution; for if we bear in mind the physiological law of vitality we shall readily perceive that since the blood is the medium

of supply and waste it should be taken with great caution, and only such a quantity as will relieve the impeded circulation, and dyspnoea — and we should never lose any time in supply the proper amount of good nutritious food to meet the demands of the system to supply the waste caused by the loss of blood.
If the patient be not a young, and plethoric subject with a bounding pulse, the same ends may be attained perhaps just as well by the administration of some active cathartic, followed by a full dose of opium to relieve the pain, and to tranquillize the system. Opium exerts a direct effect upon the inflammation, as it lessens the pain, by obtunding the sensibility of the nerves — and also acts as a sedative to the heart's action, and thereby diminishes the flow of blood to the sensitive lung. Warm fomentation, such as turpentine stupes or poppy head fomentations will also assist in relieving the pain.

The temperature of the room should not be allowed to fall below 65° Fah. and should be kept moist by steam. Such are the general indications to be attended the 1st stage of the disease. The indications in the 2nd stage are still to relieve pain and quiet nervous irritability, to cause or promote the absorption of the exudation in the lungs and support the powers of life during the attack, and stage of convalescence. To relieve pain nothing will be found more beneficial than opium or some of the other common anodynes. Carbonate of ammonia passes the property of relieving pain as well as a stimulating effect, and as stimulants are generally called for during this stage, it may fulfil both indications and indeed will. To promote absorption there is no agent better suited to this purpose than iodine in some of its various forms. The Tincture perhaps is the best form tho' the iodide of iron is called for not only for its soobefacient effect but for its tonic property

the tincture should be applied with a brush over the chest. the Iodide of Potassium is also a very valuable agent. Quinine is almost always required and should be given in conjunction with some other tonic, such as iron, or some vegetable tonic. Blisters should not be used as they interfere with examinations of the chest. The patient should be well nourished from the very beginning of the disease with good nutritious food, such as beefteа raw eggs, and milk. When indications of exhaustion appear stimulants should be given, such as wine, brandy and egg mixture. If there be great febrile excitement without any tendency to great prostration give veratrum viride. Stimulation should neither be commenced too early, continued too long or given in too great quantities. The best indication for disease in pneumonia as in other diseases, is when the action of the heart become feeble, frequent and intermittent, and [illegible]

use and continuance should be regulated by the action of the heart. During convalescence the patient should be allowed a good wholesome diet, fresh air and plenty of exercise. His clothing such that he will not be affected by the vicissitudes of the weather. Such is the plan of treatment I should adopt in a case of simple acute Colic pneumonia.